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Politics behind Globalization: The Influence of Political and Security Variables on Economic Interdependence among States

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To my parents

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Abstract

The dissertation investigates the influence of domestic and international politics on economic interdependence among states in the age of globalization. On the one hand it aims at updating the studies on the influence of political variables on international trade taking into consideration the post-Cold War years. On the other hand it aims at expanding the operational definition of economic interdependence performing the first empirical of the influence of politics on bilateral flows of FDI. Through an extensive use of panel data analysis, I find that both domestic and international politics have a relevant impact on economic interdependence even in the context of globalization. However, none of the classic theories of international relations on the causes and consequences of interdependence can fully explain the current dynamics. The system is increasingly complex and the realist and liberal logics seem to work together accounting for different phenomena that happen contemporaneously.

INTRODUCTION

There is not – and never has been – a clear dividing line in the real world between what is economic and what is political.
Susan Strange

Interdependence really is complex.
Erik Gartzke

The two sentences cited above masterfully summarize the origins, the spirit, and the main findings of this work. Susan Strange has been one of the most important scholars in the field of International Political Economy and she has always fought the typical conception conveyed by most handbooks of economics, according to which the economic and the political spheres of human life and society are completely separated worlds. In fact there has always been a tight dialectical relationship between politics and economics, especially at the international level. The investigation on this relationship and on the reciprocal influences between these two areas has been the domain of international political economy, the subfield of international relations that constitutes the scientific background of this work. Contemporary economics usually does not take into consideration the influence of political variables on economic phenomena, as it can be easily noticed looking at the most important models of international economics, where political factors are at best seen as exogenous shocks. On the other hand, political science and classic international relations have largely overlooked the importance of the questions related to the efficient allocation of resources, as well as the potential impact of international economic dynamics on political relationships among states, usually assuming that if there is any influence between the two spheres of international life, the causal arrow must go from politics to economics and not vice versa. International political economy, instead, has constantly tried to study the political causes of economic effects and the economic causes of political effects, from both a theoretical and an empirical point of view.[1]

Although there is no clear dividing line between politics and economics, it is true that the logics of politics and the logics of economics differ in the ways they conceptualize interactions among the relevant actors as well as in the importance they attach to the identity of such actors.[2] According to the logic of economics, the identity of actors does not have any significance for the functioning of the economic system, since any consideration or distinction connected to the identity of actors would introduce distortions in the efficient allocation of resources performed by the market. Actors, whether they are individuals or firms, are typically rational utility-maximizing individualists that are not interested in the identity of other actors or even in their performance. They only care about their own performance and they get in contact with the others only if

[1] See among others Gilpin, 1975; 1987; Strange, 1988; 1996; Andreatta, 2001.
[2] See Andreatta, 2001.

so doing they can take part in exchanges that increase their individual utility.

In the political sphere, instead, identity is a central issue and drawing distinctions between "us" and "them" is a principal characteristic of the political world. Carl Schmitt considered the capacity of drawing distinctions the essence of the political phenomenon, so that a people would exist in political terms only if it is able to determine the opposite categories of "friend" and "enemy" on its own. However, it is not necessary to embrace the conflictual conception of politics theorized by the German realist thinker to acknowledge that politics is about creating distinctions among actors that live in constant connection with each other. Political thinkers have seen various levels of peace/conflict in social relations, but they have never conceptualized actors in isolation. On this issue, we can easily recall Aristotle's view of man as a social animal as well as Kant's idea of "unsociable sociability of man" to verify that when politics is at stake, actors can never be thought in isolation. In political terms, the first issue is defining who gets what is available, while the ways to increase the total amount of existing resources is only a secondary issue.

Even though at the domestic level the political and the economic logics still confront each other on issues such as redistributive policies and the criteria to be applied in welfare state debates, in the majority of countries the market can at least perform its functions in a framework of stable norms that ensure a degree of order.[3] At the international level, instead, the logic of efficiency represented by the market has to face the

[3] On the relationship between the power of the state and the market see Panebianco, 2004.

consequences of anarchy, that leads states to be always concerned about their security and their survival – that is about the maintenance of their political identity. The realm of national security constitutes the main limit to the full deployment of the economic rationale in international affairs, to the point that even Adam Smith, universally recognized as the progenitor of modern liberal economics, was aware of such border. He acknowledged that the specialization inherent to the international division of labor that derives from a general system of free trade could not be allowed to damage the domestic industries that are necessary for the preservation of the national security. If states could profit from economic interdependence in general, they had to keep their independence for what concerned the production of the goods that were strictly necessary for their own national security.

The concept of interdependence is at the centre of much theoretical and empirical research in the field of international political economy, since it embodies the knot that binds together the political and the economic concerns of states at the international level. Many scholars have proposed definitions of this concept and explanations of its causal importance in the relations among states.[4] One of the most famous conceptualizations is provided by Keohane and Nye, who defined the components of interdependence as "sensitivity" and "vulnerability".[5] Sensitivity represents the extent to which one country is affected by the actions of another, whereas vulnerability stands for the extent to which a country can insulate itself from the costly effects of events that occur

[4] For a brief review see McMillan, 1997.
[5] See Keohane and Nye, 1977.

elsewhere. Interdependence then means mutual dependence, a condition in which countries are both highly sensitive and vulnerable to each other. Keohane and Nye's idea of mutual dependence has much in common with Baldwin's view of interdependence, which refers to "international relationships that would be costly to break".[6] In other words, establishing a relationship characterized by interdependence can be profitable for states, but then if they want or are forced to go back to a condition of autonomy, such step can prove to be very costly, both in terms of internal reorganization and because of the possible adverse reaction of other countries.

From a strictly theoretical point of view, looking at these definitions does not clarify which are the types of international ties that can be involved in an interdependent relationship. The Keohane and Nye definition is intentionally broad enough to encompass economic, diplomatic and military relations between and among states. Similarly, although Baldwin uses the term "costly" and phrases such as "opportunity costs", there is no reason to infer that he refers only to economic ties. However, for the purpose of this study I will refer only to economic interdependence, even when I omit the adjective from the text for reasons of parsimony. In order to explicit my view on this concept, I will refer to economic interdependence as to that multidimensional process that binds states together through international commerce, portfolio investments and FDI, in a way that makes states partly dependent on each other and that gives rise to various degrees of sensitivity and vulnerability towards the behaviors of the other actors and the conditions of the general system in a context of open economy.

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[6] See Baldwin, 1980.

Economic interdependence has been usually associated to trade, that is by far the most ancient form of economic link among states. From such point of view, the features of interdependence have been defined realizing that international economic competition leads states to specialize, thus becoming dependent on others for export markets and for the imports of those goods whose production is not profitable at home in relative terms. This dependence generates not only a degree of sensitivity for what happens abroad, but also a real condition of vulnerability, given that the economy under scrutiny is dependent on such flows. The eventual interruption of those flows would cause remarkable costs, which could be manipulated by another political actor, since by definition an actor's exports are another actor's imports and vice versa. In other words, economic interdependence has an economic origin, but its consequences are also inevitably political and they cause differences in the behavior between interdependent and non-interdependent states.

Another theoretical difficulty linked to the concept under scrutiny is that in principle interdependence can be taken as a systemic property, as a description of dyadic relationships, or as a property of specific nations.[7] For what concerns this particular issue connected to the levels of analysis, I share the view of interdependence as a feature of the relationships' level, that has been defined by Glenn Snyder as a semi-systemic level of the international system where variables such as alliances, degrees of economic dependence/interdependence or degrees of polarization define the situational contexts within which

[7] See Stein, 1993.

interactions among states take place.[8] Relationships are not models of interactions, but rather the background against which interactions take place. These elements of international reality not only transmit pressures deriving from unit attributes and structure, but also exercise autonomous influences on the behavior of actors.

The influences exerted by economic interdependence have been interpreted in different and sometimes even opposite ways by different traditions of thought in international relations. On the one hand, a liberal and fundamentally optimistic view tends to highlight the cooperative essence of economic relationships and their beneficial effects on the political system. In this case, the logic of economics prevails over the logic of politics and as a matter of fact this school of thought assumes that an increase in the amount of economic exchanges would lead the states towards better reciprocal comprehension and a higher degree of cooperation. From this point of view, conflicts are generated by mistakes, misunderstandings and distortions in the flows of information. Problems that can be solved with appropriate policies and that are not necessarily inherent features of the international system. On the other hand, the realist tradition adopts a more pessimistic view of the role of interdependence and it highlights not only the weakness of economic ties, but also their eventual conflictual potential for states that are competing for scarce resources. In this case the logic of politics prevails over the logic of economics, states are *positionalist*[9] actors that are above all concerned with the distribution of relative gains from economic exchanges and the

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[8] See Snyder, 1996.

[9] On the conception of states as positionalist actors see Grieco, 1988.

occurrence of war is far from being an accident, but it is rather a natural though unpleasant form of interaction in the context of the anarchic international system.

Both classical views about the relationship between international politics and international economics, however, seem to be a little too absolute and simplistic, at least for the current state of the international system. On the one hand, the recurrence of war even in presence of massive global economic flows casts some shadows on the superiority of the economic logic over the logic of politics. War undoubtedly implies enormous costs and can seem irrational, but states have nonetheless continued searching for a higher degree of national security, even at the expense of economic advantages. On the other hand, however, it is difficult to understand why states have allowed or even promoted such a dramatic increase of global economic flows if those flows are not only insufficient to prevent the outbreak of war, but they are also a source of vulnerability.[10]

Empirical studies that have been performed by scholars working in the field of international political economy during the last twenty years have highlighted that the relationship between the two spheres of international reality is much more complex than assumed by classical liberalism and classical realism. The essence and the importance of the sentence by Erik Gartzke that I quoted at the beginning of this introduction can be understood looking at the results of many empirical studies on economic interdependence, performed by Gartzke and by other scholars. The results of increasingly sophisticated quantitative

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[10] See Andreatta, 2001.

research have highlighted that states do care a lot about their security, but they also seek economic profit. In a nutshell, they are concerned with relative gains, but they are also sensitive to absolute gains. Realist hypotheses predicting a higher degree of interdependence between allies for reasons of international security have proven to be important to understand the dynamics of economic interdependence, but they go hand in hand with liberal hypotheses predicting a larger amount of trade between democracies. The relative strength of these different assumptions is often determined by the context of interaction, the polarity of the system, the period in which such interactions take place. Also for what concerns the identity of the relevant actors, the empirical results provide a much more complex picture than those proposed by classical theories. As claimed by liberalism, private actors are far from being irrelevant in international economic relations, since they are able to influence the behavior of states and move enormous capitals and amounts of goods autonomously. At the same time, however, states do not appear to be obsolete hulks of an ancient age. On the contrary, they are still central actors in every sphere of international relations, even though the instruments at their disposal have changed, their power is probably reduced and also their nature has probably undergone some changes. Finally, even institutional liberalism sheds some precious light on contemporary international relations, since international organizations result to play a significant role in solving asymmetries of information, promoting trust and thus stimulating economic interdependence. Nonetheless, not all organizations perform in the same way and the political will of states seems to play still an important role at least in the initial phase of the lives of such institutions.

The empirical studies that have investigated the reciprocal influences between international politics and international economics can be divided in two broad strands: those that study the influence of political variables on economic phenomena and those that apply the opposite strategy of studying the influence of economic variables on political outcomes, such as the outbreak of armed conflicts. My dissertation can be included in the first stream of literature. Several remarkable studies that share such a perspective have provided important knowledge on the security externalities of international trade, on the tendency of democracies to trade more with each other than with autocratic states and on the ability of international institutions to stimulate commerce among their members. Nonetheless, all these studies share two common features. First of all, nearly all of them analyze economic data that refer to the Cold War or to the period before World War I, without taking into consideration the economic and political dynamics of the post-bipolar system. Secondly, all of them have operationalized economic interdependence through bilateral trade, leaving aside any other kind of economic flow, even if other forms of economic interdependence, such as those generated by massive capital flows, are getting more and more important in contemporary international relations. Taking no notice of the economic dynamics that take place in the post-bipolar international system prevents a deeper understanding of the so-called age of globalization, a period in which the economic sphere has become even more important than in the past and in which the relationship between politics and economics has undergone important changes in the opinion of many observers.

I acknowledge the common features of existing empirical literature as well as its limits and I try to provide some additional knowledge on the connections between contemporary international politics and international economics by means of two empirical studies. The first study builds on the tradition of research that investigates the influence of politics on bilateral trade flows, updating such body of literature through the use of economic and political data that refer to the post-Cold War years. We know enough about the respective relevance of realist and liberal logics for the issue of economic interdependence in the pre-World War I system and in the bipolar system of the Cold War, but we have only a few hints on the way politics influences international trade in the age of globalization. We have many theoretical hypotheses, but almost no empirical evidence about the impact of politics on the growing amount of commercial flows that constitute a central feature of contemporary international affairs. To tackle this issue, I elaborated a model that includes both liberal and realist variables in order to evaluate the accuracy of the hypotheses that descend from such contending approaches for the current international relations. In addition, I am also interested in comparing the results of my studies with the previous ones in order to understand the effect of the systemic change that followed the end of the Cold War. As regards the features of the post-bipolar system, I believe that studying the ways the great powers manage the bilateral trade flows among them and comparing such results with the previous literature could also provide some useful information about the configuration of power of the present system, that has been associated with almost all polar configurations from unipolarity to the maximum diffusion of power.

The other main aim of my thesis is instead pursued by the second empirical study on FDI flows. This study aims at enlarging the operational definition of economic interdependence using other important economic flows as dependent variable instead of international trade. So far, all empirical studies on the influence of politics on economic interdependence have referred to bilateral trade as their only indicator of economic ties among states. Nonetheless, in the last thirty years capital flows have become more and more important in the world economy, so that it does not seem possible to overlook them anymore. If it is true that they can share some common features with trade, they are also likely to introduce some remarkable differences. For this reason, I decided to apply a gravity model that comprises several realist and liberal political variables to bilateral FDI flows. Recently, some studies have considered the impact of politics on FDI inflows that enter in a given state, but no one has ever studied the influence of politics on bilateral FDI flows, at least to my knowledge. Considering bilateral flows allows us to include in the analysis not only political variables that belong to the unit level of analysis, such as the presence of armed conflicts in the state under scrutiny, but also variables that belong to the relationships' level, such as the presence of alliances between the home and the host countries. Considering the exploratory nature of this study, I use all available data from 1981 to 2004, but since I also want to evaluate the impact of the change in the polar configuration of the system, I also perform a second econometric analysis dedicated to the post-Cold War years.

This dissertation is composed of three main chapters. The first one is dedicated to a review of the literature on the relationship between international politics and international economics, where I take into consideration both theoretical and empirical works on this issue. In the first section of this chapter, I deal with the realist tradition of thought in international relations, briefly sketching its main theoretical features and then focusing on the way it has faced the relationship between international politics and international economics. Writing such section I have tried to use a historical perspective, starting from the age of mercantilism and then recalling the ideas of Alexander Hamilton, the debate that followed World War I and the end of the free-trade system based on the hegemony of the British Empire, to take finally into consideration the more rigorous models elaborated by contemporary neorealism. The second section of this chapter is instead dedicated to the liberal approach towards economic interdependence. I briefly outline the features of the three main strands of the liberal tradition of thought in international relations and then I focus on their contribution to the topic under scrutiny, briefly revising the works of authors such as Adam Smith and Richard Cobden to finally take into consideration the highly stylized models proposed by contemporary political scientists such as Robert Powell. Finally, the third section of the first chapter deals with a review of the quantitative empirical literature on the reciprocal influences between international politics and international economics. In the first sub-section I present the results achieved so far by the studies that have investigated the effects of political variables on bilateral trade, while in the second sub-section I briefly present the results of the studies that have applied the opposite strategy. This latest branch of literature does not have a direct connection with my thesis, but taking it into consideration provides a more complete idea of the state of the art of empirical studies on the knot of interdependence.

The second chapter represents the first empirical study included in my thesis. It updates existing empirical literature testing the realist and liberal theories about the influence of politics on international trade using data that are relative to the post-Cold War years. I have built a dataset with economic and political variables for the years between 1990 and 2005 and then I have developed a gravity model of international trade that includes political variables derived both from the realist tradition and from the various strands of liberalism. This study could result to be important for two main reasons. On the one hand, it allows us to know something more about the political dynamics that lie under the surface of globalization, which is far from being totally driven by economic rationales. On the other hand, given the still unclear features of the post-bipolar system, accepting a bit of inductive method and comparing the results of this study with those that refer to the bipolar system and to the pre-World War I multipolar system could provide us some indirect hints about the configuration of the present system. As regards the structure of this chapter, after a brief introduction, I present the hypotheses that have been developed by the existing literature on the impact of some relevant political variables on bilateral trade, and then I describe my research design and introduce all the variables that I included in my model. A section dedicated to methodology follows and after such section I comment the results of the econometric analysis recalling the hypotheses that have been formulated previously. The following sub-section is important because it deals with the results that have been obtained applying the research design to the bilateral trade flows that link the great powers, excluding all other states. Such a choice makes sense for two reasons. On the one hand, given their peculiar position, the great powers are likely to behave differently from lesser states and the relationships they entertain among them can be particularly useful to grasp some information on the power configuration of the post-bipolar system. On the other hand, several previous studies on the influence of political variables on international trade have been performed considering only the great powers, so that applying the same strategy to the most recent years favors the comparison of the results. Finally, in the last section I draw some conclusions from the results achieved in the chapter.

The third chapter includes the second empirical study of my thesis. It is probably the most innovative part, since it aims at expanding the operational definition of economic interdependence through an empirical analysis of FDI. So far, all empirical studies that have investigated the influence of political variables on economic interdependence among states have used bilateral trade flows as their dependent variable and only recently some studies have taken into consideration the influence of political variables on the total amount of FDI that enter in a given state. To my knowledge, this is the first empirical study that looks at the influence of politics on bilateral flows of FDI, applying a gravity model and including political variables form all three levels of the international system: the unit level, the relationships' level and the systemic level. Given the explorative nature of this study, I exploited all available data and I included in the general database all years from 1981 to 2004. In a second phase, I broke it down into two separate databases that refer to the Cold War years and to the post-Cold War years respectively, in order to investigate the role of polarity on bilateral FDI flows. For what concerns the structure of the chapter, after a short introduction I briefly explain how this study derives from the meeting of two different strands of literature, the one that deals with the influence of politics on bilateral trade and the more recent one on FDI inflows. In the following section, I present some economic theory on FDI diffusion, while in the third section I introduce my hypotheses on the influence of the most relevant political variables. The forth section is dedicated to the description of the research design and of the variables used in the model, while the fifth one is a brief note on the econometric methods I have used and on the methodological problems I have faced. In the sixth section I comment the results of the econometric analysis of the general database, while in the following section I comment the results on the influence of polarity. Finally, in the closing section I summarize some conclusions that can be derived from the whole chapter.

In the conclusions that follow the third chapter I go over the main points of my thesis, I try to put together the results of the empirical studies and I suggest how such results can be useful for a progress of the discipline.

1. CONTENDING THEORIES (AND PRACTICES) OF ECONOMIC INTERDEPENDENCE

1.1 Introduction

The central goal of this thesis is investigating whether the increasing economic interdependence among states, which has become a prominent feature of the international system emerged from the end of the Cold War, is a purely economic phenomenon, caused by the natural growing integration of international markets, or it is influenced by any political variable. The political theorists who have dealt with the relationship between politics and economics at the international level have all reached the conclusion that these two spheres are far from being separated and non communicating worlds. On the contrary, international politics and international economics seem to have always influenced each other in various ways and for this reason the main divide between different traditions of thought on the issue of economic interdependence among states has to do with the premises, the trajectories and the consequences of such phenomenon, but not with its nature of linkage. The empirical studies that take into consideration the dynamics that have characterized interdependence in the pre-World War II multipolar system and in the Cold War bipolar system, as well as the analyses I have undertaken and that I present in the next two chapters, include political variables that respond to different and even opposite functioning logics. The inclusion of such diverse variables in the models reflect the will to put to test hypotheses deriving from two theoretical traditions that have contrasted each other for centuries and that have also had direct consequences on the policies deployed by states. These two traditions are realism and liberalism, in their different versions and variations.

This thesis supports the position according to which contemporary economic interdependence is a complex phenomenon, influenced by different actors, logics and levels of analysis. Consequently, none of the linear and simple causal mechanisms described by these two classical schools seem to be sufficient to explain the causes and the consequences of current interdependence, as well as the ways by which it is connected to multiple different political issues.[11] Nonetheless, it is necessary to have at least a summary idea of the approaches fostered by the traditional paradigms for various reasons: first of all, in order to know why the attention of empirical research has focused more on certain variables instead of others; secondly, to avoid shallow empiricism and the risk of adding variables without an appropriate knowledge of the theoretical premises that could justify or even require the inclusion of specific variables in empirical analysis in order to test the relevance of such theories; and finally because classical works are often rich in insights able to illuminate present and future research agendas.

It is exactly from this succinct presentation of the ways realism and liberalism have handled the knot of interdependence that should derive the perceived necessity to move towards a wider framework for the study of the relationship between economic interdependence and politics, in accordance with the results of the latest empirical studies that will be presented in the second half of the chapter. Clearly, every theory chooses a perspective and focuses more on certain aspects of reality than on others. This way of behaving is typical of many scientific disciplines in the western way of thought and does not have to be considered a flaw, but rather an appreciable manner of

[11] The same approach is used and explained in Andreatta, 2001.

framing theories and models in social sciences, because it helps avoiding confusion and it increases clarity. Nonetheless, when on one hand the results of empirical studies do not support the hypotheses advanced by only one theory, but find instead solid bases for the main hypotheses of contrasting theories; and on the other hand, at the theoretical level, the current international system is still lacking a widely accepted definition and conceptualization, we can probably act in a slightly inductive way and try to grasp the relevant features of the phenomenon at stake from the data, as well as those of the system where it takes place. Both these objects of analyses currently seem to call for an integration of classical theories and a move towards greater complexity.

This concise journey through existing theories and empirical findings concerning the relationship between economic interdependence and relevant political variables is organized as follows: the next section will be dedicated to the realist point of view on the topic, quickly highlighting the recurrent arguments that constitute the peculiarities of this school and which are still relevant for contemporary empirical research. The second section, instead, will take into consideration the liberal tradition of thought in international affairs and it will show its influence on current ongoing research. Finally, the third section will be devoted to a review of past empirical studies, with a first part dealing with the stream of literature that investigates the influence of political variables on economic interdependence, like the present thesis, and a final sub-section that takes into consideration the literature adopting the opposite strategy of studying the influence of commercial flows on the recurrence of armed conflicts among states. Even though this latter branch of empirical research uses a different approach from mine, it is nonetheless useful to bear in mind at least its development and its most important findings, because they help us to get a more complete picture of the relationship between international politics and international economics as well as to have a more comprehensive knowledge of the influence of the liberal tradition of thought on the latest developments of the discipline.

1.2 Economic Interdependence from a Realist Perspective

Politics is strictly connected to the drawing of distinctions, the elaboration of different identities and confrontation between actors. From this point of view, realism is the quintessence of politics. Significantly, Carl Schmitt considered the capability of creating distinctions the essence of the political phenomenon. In his view, a people exists in political terms only if it is able to determine autonomously the groups friend/enemy and such a couple of opposing concepts, which is not a stable one, always implies the possibility (the shadow) of war, even though such outcome is not the essence of politics, but rather its *extrema ratio*. The people that refuses the existential risk of the political phenomenon is bound to extinction, or to be dominated by another people who accepts the "political".[12]

Even those branches of realism more inclined to regard political actors as snooker balls which differ among themselves only in terms of size, leaving thus aside all the questions related to their own identities, always consider such actors in constant confrontation and competition for power, security and survival.[13]

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[12] See Schmitt, 1972; Galli, 2004, pp. 178-208.

[13] Waltz and Aron are two masters of realism representing two different views on this issue. While in Waltz's structural realism every reference to the internal

Such a situation is not the outcome of a deliberate choice made by the actors: rather, it is the necessary behavior caused by the constant insecurity of the political environment – which is a typical characteristic both of the Hobbesian and of the Lockean interpretations of the political sphere.[14] From this condition of insecurity the consequent need for protection that people feel arises, together with the naissance of the nation-state, that in the realist view is the essential political actor of the modern international system. On this point, it is probably appropriate to recall that contrary to the widespread view according to which one of the principal characteristics of political realism is its state-centrism, such a feature is not an immutable philosophical assumption, but just the result of an evaluation of the current international system. Rather, realism is based on the idea that the fundamental political unit is the group, or what Ralf Dahrendorf has called the "conflict group".[15]

However, even though the salience of the realist thought transcends the limits of international politics and the dynamics it highlights can be applicable to other types of actors,[16] it is

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identities of states is labeled as "reductionist" and therefore misleading and non important, Aron included ideological homogeneity/heterogeneity in his typology of international systems. See Aron, 2004; Waltz, 1979,

[14] Bull asserts the inappropriateness of the Hobbesian state of nature to interpret the international environment, and supports the Lockean interpretation, that recognizes the existence of a rudimental society with a set of basic norms in contrast with the total absence of any social form. See Bull, 1977.

[15] See Gilpin, 1996; Schweller in Feaver et al., 2000. Indeed, realist concepts such as the security dilemma have been applied with great success to ethnic conflicts where the fighting rival groups didn't possess the features of statehood. See Posen, 1993.

[16] Political realism, especially in its classical versions, is explicitly based on a pessimistic view of human nature and on a Hobbesian view of the state of nature, therefore being also a theory of microbehavior. Morgenthau claimed

undeniable that most of the realist thinking has been captured by the relationships undergoing among the states since the formation of the European classical nation-states system. Within the borders of the state, cooperation among individuals is granted by a sovereign authority that is able to impose it upon all subjects exposed to its power. On the contrary, in the relations among states, where a superior government is absent, stopping the struggle for the control of scarce resources is simply impossible. Conflict is taken for granted by realism and cooperation is always contingent, eventually emerging from the imposition of a hegemon state or the necessity to face a common threat.[17] For the realist analysis of international politics, the essential characteristic of cooperation among states is shakiness, since cooperative efforts do not emerge from an authentic predisposition to cooperate, but from a temporary suspension of the conditions that lead to conflict. For all versions of realism, much of international politics is "life on the Pareto frontier",[18] thus meaning that states usually already have been able to cooperate to such an extent that no further moves can make all of them better off. On the contrary, in the next section it will be clear that for the liberal theories at least a part of the amount of conflict is due to mistakes that can be reduced thanks to

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that power politics has its roots in the spasmodic search for power that is common to all men and this is the reason why it is inseparable from social life. See Morgenthau, 1948. At the opposite end of the spectrum, Jervis maintains that the realist approach is so lively that even if the European Union reached a further level of development, so that it could look like a state more that it currently does, it would reach that level because the states would be stimulated to act according to the realist theory and once the EU had reached that level the same realist hypotheses should be applied to it. See Jervis, 1999.

[17] In Waltz's interpretation both these components concur to explain the initial steps of the European integration process. See Waltz, 1979.

[18] See Krasner, 1991.

adequate measures, thus leaving also more room to prescriptive translations of theory.

A fundamental feature of international politics from the realist point of view is then represented by the existence of the "security dilemma", which derives directly from the anarchical structure of the international system and from the necessity of states to think always in terms of self-help. On one hand, the necessity to secure themselves from others' threats induces states to try to acquire an increasing amount of power. On the other hand, however, this dynamics makes other states feel less secure and stimulates them to react and do the same. Since nobody can be perfectly and steadily secure in a world of competing units, this situation causes the struggle for power and the vicious circle between the build-up of power and security.[19] The insecurity of an anarchic environment is preferable to extinction or to a radical change in one's way of living, so that in these conditions the only possible peace is represented by a form of equilibrium between conflicting interests, achieved through mutual deterrence: essentially, the famous balance of power.[20]

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[19] See Herz, 1950.

[20] The concept of balance of power is a typical recurrent idea of political realism, but it also distinguishes between classical realist doctrines and structural or neorealism: while classical realism is also a prescriptive doctrine of foreign policy that postulates the achievement of the balance of power, Waltz has always maintained that his theory is a theory of international politics according to which the structure of the system drives the states towards a situation of equilibrium, independently from their express will and policy. See Morgenthau, 1985; Waltz, 1979; 1996. For a new version of realism (neoclassical realism) which starts from Waltz's structural analysis but recovers some features of classical realism, see Schweller, 1997; in Feaver et al., 2000; 2003. For a position according to which Waltz's neorealism cannot avoid to be also a theory of foreign policy, see Koenig-Archibugi, 2007.

In such a context, states will be compelled by the anarchical condition of the international system to consider their own security as the fundamental goal of their foreign policy, subordinating every other economic or political aim to that basic need. In a realist world there is a hierarchy of issues according to which security and maintenance of the relative position are the primary concerns of states. As a consequence, all economic issues cannot be evaluated from an economic point of view, but depending on their capability to influence the search for national security. Luttwak claims that in a realist world the grammar of trade must respect the logics of politics. Economic cooperation therefore emerges from strategic reasoning and instrumental motives, with the aim of achieving a particular systemic result and persisting only until the situation changes.[21]

In a particular period of European history, during the consolidation of the nation-states and the slow transformation of some of them in imperial powers, an ancient form of realism was translated into foreign and economic policy doctrine. In the age of mercantilism, European decision-makers were perfectly conscious of the importance of wealth and economic flows, but they were even more aware of the dangers caused by the anarchic international system. In their quest for both power and wealth, the mercantile states put power at the first place, so that although wealth was also an aim per se, it was above all an instrument for the achievement of more power and it had to be subject to the logics of power.[22] Francis Bacon significantly described the policies of Henry VII as: “bowing the ancient policy of this Estate from consideration of plenty to consideration of power”. In addition, the mercantilist were

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[21] See Luttwak, 1990.
[22] See Heckscher, 1969.

diligent realists not only because of their views on the relationship between the achievement of economic gains and the necessity to control others' gains in the generalized struggle for power, but also in a broader sense, since they shared a belief in unalterable laws governing social life in general and a growing tendency to stress social causality. They strongly perceived the necessity of emancipation from belief in traditional political and social institutions, matched with emancipation from religious and ethical ideas in the social field. The mercantilist period was also marked by secularization and amoralization, with Bernard Mandeville being the typical exponent in that respect.[23] It is impossible not to create a link between this environment and the ideas of Machiavelli, the first realist master who theorized the detachment of politics from ethics and who wrote:

"It being my intention to write a thing which shall be useful to him who apprehends it, it appears to me more appropriate to follow up the real truth of the matter than the imagination of it; for many have pictured republics and principalities which in fact have never been seen and known, because how one lives is so far distant from how one ought to live that he who neglects what is done for what ought to be done sooner effects his ruin that his preservation".[24]

The work of Bodin and Hobbes was to separate ethics from politics and to complete by theoretical means the division which Machiavelli had carried out on practical ground. It is not a coincidence either if Francis Bacon was among the first who

[23] See Heckscher, 1969.
[24] See Machiavelli, 1997.

praised Machiavelli "for saying openly and without hypocrisy that men are in the habit of doing, not what they ought to do".[25]

To go back to the strictly economic field, Viner tried to define the basic tenets common to all versions of mercantilism in four propositions: first of all, mercantilists considered wealth as an absolutely essential means to power, whether for security or for aggression; second, power was seen as essential or valuable as a means to the acquisition or maintenance of wealth; third, wealth and power were each ultimate ends of national policy; fourth, wealth and power were considered as belonging to the same sphere because there would be a long-run harmony between them even though in particular circumstances it could be necessary for a time to make economic sacrifices in the interest of military security and therefore of long-run prosperity.[26] Mercantilism was not a perfect and coherent system of thought, but it reflected and was a response to the political, economic and military developments of the XVI, XVII and XVIII centuries. It represented the emergence of strong national states in constant competition and the quickening of economic activities due to internal changes within Europe and the discovery of the New World.[27]

Of critical importance were the evolution of a monetized market economy and the wide range of changes in the nature of warfare that have been characterized as the Military Revolution. The beginning of transformation in warfare was the innovation of gunpowder and the rise of professional armies. These military innovations greatly enhanced the role of manufacturing as an

[25] See quot. in Carr, 2001.
[26] See Viner, 1948.
[27] See Gilpin, 1977.

element of national power and as a source of wealth. With the rise of standing armies, warfare increasingly became an instrument of national policy. Armies became more costly, required large bureaucracies and in this new environment states required large quantities of bullion to finance their newly formed professional armies and the balance of payments drain of foreign campaigns. The acquisition of money or bullion became the *sine qua non* of national power.[28]

A related and paradoxical consequence of the Military Revolution in terms of national security was that the great European powers became decreasingly self-sufficient and increasingly dependent on the world economy. The rise of professional armies and the new technology of warfare required vital raw materials, such as naval stores or saltpeter for gunpowder. These war materials could frequently be acquired only through trade or the export of bullion. Mercantilists appreciated that the international economy had become an important source of both the financial and material sinews of national power. For this reason, the rising middle class devoted to commerce and manufacture was regarded as an important asset that should have been helped and supported by the state, provided that the system of trade exchanges was organized by the national authorities and aimed at supporting the power of the country.

This loss of self-sufficiency and new vulnerability contributed greatly to the insecurity of states. In that context, the business of war on land flowed into the war of business at sea and across the seas and it is often very difficult to separate them, because in every instance European ventures on the oceans were

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[28] See Gilpin, 1977.

sustained by a combination of public, quasi-public and relentlessly private enterprise.[29] These trade wars were based on the idea that world welfare was a fixed amount and therefore that trade was a zero-sum game.[30] They used to be fought not only with guns on board the ships, but also with economic measures aimed at shaping trade flows, and usually at reducing one state's dependence from foreign goods. In this light, England banned imports of many products from the Netherlands in the second half of XVII century and imposed prohibitions against trade with France at the beginning of XVIII century, stimulating at the same time national manufacturers.[31] In such competitive environment, mercantilists embraced the idea that as far as money was concerned, what mattered was not the absolute quantity, but the relative quantity as compared with other countries. Since the quantity of money and wealth in the world could be taken as constant, a country could gain only at the expense of other countries.

This focus on differences, on the identity of the actors who benefit from trade and on the amount of relative gains that are converted into relative power is a typical realist way of thinking and it can be retrieved also in the works of Rousseau. The Swiss philosopher argued indeed that interdependence does not produce accommodation and harmony, but suspicion and incompatibility.[32] Massive international economic flows were seen as a driving force behind changes in the relative power of states because of their dynamic impact on national development. Such changes in the relative power of states, in turn, are

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[29] See Brady, 1991.

[30] On trade wars see Conybeare, 1987.

[31] See Kennedy, 1976; Ormrod, 2003.

[32] See Hoffmann, 1963.

considered by realists among the most frequent causes of major wars.[33] In addition, over time interdependence engenders dependence between states rather than symmetrical interdependence. Rousseau viewed this form of inequality between states as a source of insecurity and thus as a key source of world conflict. Although he recognized that commerce brings wealth to the trading states, he concluded that the inequality it also brings is more dangerous for world politics.[34]

However, following the age of mercantilism, Great Britain redefined her national security interests in accordance with the precepts of liberalism and under the pressure of the industrial revolution, which increased the interlocking of economic activities within and among nations through increasing functional and geographical specialization of production. The industrial revolution and rapid economic growth based on new production methods undercut the static mercantilist conception of wealth. The changes in the British economy and British economic thinking, due to the industrial revolution and the spread of Adam Smith and David Ricardo's ideas, led Great Britain to discover that in the new context the costs and disadvantages of empire and territorial control outweighed its benefits. By the end of the XVIII century English decision-makers acknowledged that ideals of imperial self-sufficiency and of exclusive economic spheres were impeding the natural flow of trade and handicapping growth. British supremacy and security, liberal free-traders argued, rested on her manufacturing and naval supremacy, not in the empire. Technologically more advanced than her competitors, Britain could capture world markets and consequent massive revenues

[33] See Gilpin, 1983; Mearsheimer, 2001.
[34] See Hoffman, 1963.

with cheaper goods. Why should Britain restrict her trade to a closed empire when the whole world lay open and desired her goods? Through the importation of cheap food and the concentration of her comparative advantage in industrial goods, Great Britain could out-compete the rest of the globe and thereby ensure her security.[35] According to Lord Palmerston, the substance of Britain's eternal interests remained the same: prosperity, progress and peace, always provided that the latter could be secured with honor. All that was happening was that they could now be achieved more advantageously by newer policies.[36]

Prior to the emergence of strong nationalistic sentiments in Europe and the rest of the world, and before the rise of industrial competitors, the British were able to extend their trade and influence without encountering much resistance. Under the influence of British industrial and later financial centers, the world economy became more and more integrated and although force was occasionally used to gain economic advantage and to open economic intercourse, the main inducements for integrating the world economy became the benefits which could be derived from participation in the developing world. Classical economic liberals, however, tended to see only the benefits of increasing trade and interdependence, overlooking the costs that a market system imposed, at least in the short run, on the welfare and security of particular groups in England and of other societies abroad. Nor were they sufficiently aware of the reaction of lesser developed economies to the impact of unregulated market forces. Next to the exponents of the emerging socialist school of thought, one of the most important critics of the liberal

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[35] See Gilpin, 1977.
[36] See Kennedy, 1976.

free-trade ideology was Alexander Hamilton, realist and protectionist component of the founding fathers of the United States.

Like the mercantilists' before him, Hamilton's defense of protectionism was based on the so-called infant industry argument, but he modernized the mercantilist thesis contesting the basic assumption of Ricardo's liberalism: the static nature of comparative advantage. According to that view, trade originates and is mutually profitable because nations are endowed differently with respect to resources, labor and other factors of production and such factors are considered to be fixed attributes of individual countries. In Hamilton's views, on the contrary, an economy's position in the international division of labor is not determined by unalterable endowments. The government, through national economic policies, can transform the nature of its economy and international economic position. Like the mercantilists before him, Hamilton identified national security with the development of manufactures and argued that the state has a principal role in guiding economic activities. One of its most important aims is supporting such manufactures, as they "tend to render the United States independent of foreign nations for military and other essential supplies".[37] Like the mercantilists as well, he regarded economics as subordinate to the fundamental task of state-making.[38] Economic nationalism descending from Hamilton's ideas, both in the XIX century and today, is a response to the tendency of markets to concentrate power and wealth in the short and medium run, as well as to establish dependency relations between strong and weak economies.

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[37] See quot. in Earle, 1986.

[38] See Earle, 1986.

For what concerns his view of interdependence, he maintained that the prosperity of the manufacturing sector appears to be connected not only to the wealth, but also to the independence and the security of a country. In his view, every nation that aims at its own security must endeavor to produce on its own all essential national supplies. These supplies comprise the means of subsistence, habitation, clothing and defense. In determining the commodities on which duties should be levied and the amount of such duties for the purpose of encouraging domestic manufactures, Hamilton claimed that primary consideration should be given to the issue of national defense.[39] This is necessary because contrary to Montesquieu's hypotheses the natural result of commerce is not to promote peace, but rather to cause recurring wars. In his opinion, international trade has only changed the reasons for war, which under the ancient economic system used to be provoked mainly by hunger for territorial expansion, while at his times it was often grounded in commercial motives. During the war with Great Britain Hamilton realized that the interruption of essential commercial flows by an enemy that controls the ocean can be very costly for a country and for this reason a state that wants to preserve its independence and be ready to fight for it should avoid being too dependent on others.[40]

Hamilton's views were shared also by the German historical school and by List in particular, who regarded British liberal policies as the economic policies of the strong. The interdependent world economy of the XIX century was for him an expression of Britain's national interests, since the British had used their power to protect their rising industry and once they

[39] See Earle, 1986.
[40] See Earle, 1986; Andreatta, 2001.

had achieved technological and industrial supremacy, they had turned to free trade to penetrate foreign markets. In complete accordance with the realist thinking, the economic policy of states would be therefore determined by their position in the international configuration of power relationships, more than by their economic or ideological preferences.[41] List believed that a fair and safe cosmopolitan world economy would have been possible only among equally developed countries and for this reason he advocated protectionism through high tariff barriers, in order to protect the development of German industry.[42] In List's own words: "war or the very possibility of war makes the establishment of a manufacturing power an indispensable requirement for any nation of first rank".[43] A state which suffers from the insecurity inherent in the anarchic international system cannot dare being the object of other states' will and policies, even if so doing it renounces to the profits from trade, because survival and independence are simply invaluable. The greater the productive power, the greater the strength of the nation in its foreign relations and the greater its independence in time of war.

At the beginning of XX century, the rise of new powers and the relative decline of others had undermined the foundations of the European balance of power and of the British-centered liberal international economy. But though the war destroyed the existing international political and economic order based on the hegemony of Great Britain, it did not give rise immediately to a stable, new international system. It was only following World War II that the United States emerged as the dominant power and reordered international economic and

[41] See Andreatta, 2001.
[42] See Gilpin, 1977.
[43] See quot. in Earle, 1986.

political relations in accordance with its primary interests. The interwar period was the transition from the regime of the *Pax Britannica* to that of the *Pax Americana*. In the absence of strong political and economic leadership, the period was marked by intense political insecurity and economic anarchy. The dominant motif of the interwar period was the spread of economic insecurity and national responses to the outward effects of increasing economic interdependence.

One of the harshest criticisms of classical liberal views in international politics was raised in this period by Carr, who attacked what he termed "Utopianism" on several grounds. In reaction to the main tenets of the prevailing liberal view of international affairs and to the ideas advanced by Angell in *The Great Illusion* right before the outbreak of World War I, Carr opposed the thought that a country which intends to disturb the peaceful international system is both irrational and immoral. According to Carr, the argument that war does not profit anybody was easily accepted in Anglo-Saxon countries, but it was not shared at all by Germany, which had profited greatly from the wars of 1866 and 1870 and that attributed its recent great sufferings not to World War I, but to the fact that it turned out as a defeat. The same could have been said of France, which established its authority on Alsace-Lorraine. The central point for Carr was that the presumed common interest in peace masked the fact that soma nations desire to maintain the *status quo* without having to fight for it and others to change the *status quo* without having to fight in order to do so. The liberal assumption that there is a world interest in peace which is identifiable with the interest of each individual nation helped politicians to evade the dramatic fact that a fundamental divergence of interest exists between nations desirous of maintaining the *status quo* and nations desirous of changing it.[44]

In the economic field, the doctrine of the harmony of interests was even more salient, since it was marked by the direct influence of the *laissez-faire* policies advanced by the liberals. Carr stressed the fact that the fallacy of the harmony of interests becomes evident if one looks at the difference between the thoughts and the behavior of the economic experts and those of the political leaders. The former consider the hypothetical economic interest of the world as a whole and assume that it is identical to the interest of each individual country; the latter, instead, pursue the concrete interest of their countries and assume rather that the interest of the world as a whole is identical with it. The effort of the liberal theory to separate politics from economics was simply untenable because politics and economics are always connected, especially at the international level. Carr noticed that it was still open to debate whether late nineteenth-century imperialism was to be regarded as an economic movement using political weapons or as a political movement using economic weapons, but that politics and economics marched together towards the same objective was clear enough. The struggle to control foreign markets provided an example of the interaction between politics and economics at the outbreak of war: it was difficult to say whether political power was used to acquire markets with a great economic value or whether markets were sought in order to establish or strengthen political power.[45] In sum, considerations concerning the heavy implications for national security of the integrated world economy and economic interdependence could

[44] See Carr, 2001.
[45] See Carr, 2001.

not be avoided and political leaders had to be skeptic about what was proposed as the best and natural arrangement. Also the concept of interdependence, which made its first appearances, was in fact misleading. It seemed to imply symmetrical mutual dependence, but such symmetry was rarely found in practice because states seldom assign the same value to an economic interaction, so that the assumed mutual dependence could easily turn into simple dependence.[46]

This is the point raised also by Hirschman in his analysis of Nazi's commercial policy during the 1930s. Economic interdependence establishes a power relationship among states and societies, since a market is not politically neutral: its existence creates economic power which one actor can use against another even if international commerce is not centrally organized by the government of such state.[47] Economic interdependence inherently creates vulnerabilities that can be exploited and manipulated to pursue a real form of power politics. In the words of Hirschman, "the power to interrupt commercial or financial relations with any country […] is the root cause of the influence or power position which a country acquires in other countries" through its market relations.[48] In varying degrees, then, economic interdependence establishes hierarchical, dependency and power relations among groups and national societies. In response to this situation, states attempt to raise their own independence and to increase the

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[46] See Andreatta, 2001.

[47] Lindblom agrees with Hirschman on the fact that rarely the exchange between two partners is free and equal. On the contrary the terms of the exchange can be deeply influenced by coercion and/or by differences in bargaining power. See Lindblom, 1977.

[48] See Hirschman, 1980.

dependence of other states. Hirschman notices that this situation, which is slightly more complicated and unpleasant than the picture drawn by the liberal theories, does not necessarily impede trade among the states. Rather, it leaves room for commercial strategies aimed at increasing national power, or at least keeping it at its current level, having regard of the available options. Instead of totally avoiding commerce, major states will elaborate strategies to increase their power through economic interdependence and they will carefully consider their partners, probably building spheres of influence with less powerful countries. Lesser states, in turn, will probably find themselves in a condition by which they have to enter some trading relation for some reason and in that case they will try to minimize the risk of becoming too dependent on foreign powers.[49] Hirschman thus stresses the immediate costs which could derive from the disruption of commercial relationships as well as the costs a state could undergo to convert its economic system as a consequence of such disruption, and explicitly acknowledges the possibility of multiple strategic commercial policies. So doing, he fully posits his thought in the tradition of political realism, which always considers states and the political actors in general in relational terms, having regard to the postures they have towards each other and to the fundamentally conflictual nature of politics.

From a realist perspective, the risks of interdependence lie therefore in the fact that also this domain is subject to the competition for power among states, which consequently elaborate and put into practice strategic economic policies in the relationships with their partners. These issues are stressed also by Waltz, who departs from classical realism and defines the

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[49] See Hirschman, 1980; Gilpin, 1987.

new strand of structural realism. He maintains that believing in the peaceful effect of growing interdependence is a mistake, because close interdependence means closeness of contact and raises the prospect of at least occasional conflict. Thinking in terms of interdependence cannot hide the inequalities of national capabilities, as if all states were playing the same game.[50] If interdependence is really intense, each state is constrained to treat other states' acts as if they were events within its own borders. A mutuality of dependence leads each state to watch others with wariness and suspicion. A high degree of self-sufficiency and large capabilities, however, tend to insulate a nation from the world, reducing the effects of adverse changes that originate outside its borders.[51]

According to Waltz, if a system is formally organized, its units are free to pursue a strategy of specialization, maximize their interests and profit from increased efficiency, with no concern for eventual threats to their security by the others.[52] In a system marked by an anarchic structure, on the contrary, cooperation and interdependence are much more difficult. Since units' behavior in an anarchic system is based on self-help, each unit devotes part of its resources and efforts to increase its defense capabilities against the others, instead of focusing exclusively on the promotion of its welfare. This means that while specialization in a system characterized by division of labor works to increase every unit's welfare, even if to different degrees, inequality in the distribution of additional returns strongly works against the extension of such division of labor at the level of the anarchic international system. When states come

[50] See Waltz, 1970.
[51] See ibid.
[52] See Waltz, 1979.

to terms with the possibility to cooperate to increase their reciprocal welfare, insecurity forces them to focus on the distribution of income and the relevant question becomes: "Who gets what?".[53] Until states will be uncertain about the ways their partners are going to use the additional capabilities, even large absolute gains will not be able to produce cooperation. It is worth noticing that the impediments to cooperation do not stem from the attributes or the will of states, but from the structural insecurity that dominates the system and from uncertainty about the others' intentions. Therefore, since they are enclosed in the anarchic structure of the international system, states look suspiciously at economic interdependence and tend to limit its range both because they are uncertain about the consequences of the unequal distribution of gains and because they want to avoid the risk of getting dependent on others for the supplying of some important resources.

The problem of relative gains from a realist point of view has been carefully described by Grieco, who distinguishes between the realist and the liberal way o defining states' interests. While liberals assume that states define their interests in strictly individualistic terms and aim at maximizing their own rewards,[54] realists believe that the fundamental goal of states in any relationship is to prevent others from achieving advances in their relative capabilities.[55] If states care only about their own gains, their utility function is not linked to the utility functions of others, so that if a state enjoys utility "U" in direct proportion of its payoff "V", then the liberal specification of that state's utility function would be U = V. In this case, given the anarchy which

[53] See Waltz, 1979.
[54] See Lipson, 1984.
[55] See Grieco, 1988.

characterizes the system, the major impediment for cooperation among states would be the problem of cheating.

For realists, however, acting in an anarchic system not only means that no agency can reliably enforce promises, but also that no superior government can prevent a state from using violence against another state. Anarchy and the danger of war thus cause all states to be driven by fear and distrust and oblige them to consider survival instead of well-being their first interest.[56] In this situation, states will always assess their performance in any relationship in terms of the performance of others and for this reason Grieco defines states as *positional* in character instead of atomistic. In accordance with Waltz, Grieco maintains that this tendency of states is caused by the uncertainty on others' future intentions, which, in turn, results from the impossibility to predict the future leadership and interests of partners. As a consequence, for realists the utility functions of states are interdependent and one state's utility can affect another's. Such utility function includes the state's individual payoff "V", reflecting the fact that states are sensitive to absolute gains, but it includes also a term combining both the state's individual payoff and the partner's payoff "W" in such a way that gaps favoring the states under consideration increase its utility, while gaps favoring the partner reduce it. An expression of this utility function is $U = V - k (W - V)$, where "k" represents the state coefficient of sensitivity to gaps in payoffs. The coefficient for a state's sensitivity to gaps in payoffs (k) will vary, but it will always be greater than zero. It will be greater if a partner is a long-term adversary rather than a long-term ally, but given the generalized uncertainty in international politics it will

[56] See ibid.

be greater than zero also in interactions between allies, since differences in payoffs favoring allies will always decrease the state's utility to a certain extent.[57]

To sum up, the realist tradition has gone through several centuries, it has progressively refined its hypotheses and some approaches have changed, but the basic tenets have remained the same. Realism considers the political actors under scrutiny in a relational perspective and stresses the dangerousness of the anarchic international system, which is characterized by self-help and constant competition for power. As regards economic interdependence, states cannot look only at the future advantages, even if they exist, but also and above all at the risks economic interdependence includes. These risks are mainly represented by the problem of relative gains and the danger of becoming dependent on an external power for the supplying of important resources. Such risks notwithstanding, realism does not exclude completely the possibility of a degree of interdependence among states, but such interdependence will be far from the ideal picture drawn by the liberals and rather it will emerge following security lines (friend/enemy, hegemon/follower, etc.) traced by the peculiar nature of the international system.

1.3 Economic Interdependence from a Liberal Perspective

Liberals get to opposite conclusions about the influence of economic interdependence on international politics. Such conclusions derive from different departure points for what concerns the nature of human beings and the basic logics behind

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[57] See Grieco, 1988.

political relations, as well as from a more complex and pluralist conception of international politics. In the liberal way of understanding the international system, the existence of different actors playing relevant roles and the availability of different degrees of information lead to a less deterministic idea of international relations, where differentiated individual preferences have a strong impact on outcomes. From this perspective, free trade is a goal that has to be pursued and preserved, and even the most effective way to achieve peace and international cooperation.[58] Being one of the most important paradigms also in political philosophy and economics, this tradition of thought crosses the borders of international relations' theory. For this reason, it appears much more diversified than realism concerning the logics it stresses accounting for interactions among states.

Liberalism, especially in its classical forms, is basically optimistic about the nature of human beings and politics. In general, man is inherently sociable and open to cooperation, so that in the absence of exceptional interference social life is meant to be harmonious, or at least not necessarily conflictual as it is in the realist world. Conflicts generate remarkable costs for both winners and losers and for this reason they must be the result of errors that lead to suboptimal results and can be transformed into better situations for at least one of the actors involved, in accordance with the logics of Pareto optimality.[59] Even in military conflicts, winners would be willing to reach the goals achieved through military success without fighting, while losers would benefit from giving up the object of contention without

[58] See Andreatta, 2001.
[59] See Fearon, 1995.

undergoing the destruction that is implicit in the consequences of war. The viability of reducing the objects of political and security rivalries to measurable quantities, the possibility to solve such rivalries through dialogue, diplomatic means and a better distribution of information, as well as the idea that the conflicts which are present in the international system are due to solvable mistakes, instead of being the inevitable consequence of the anarchic nature of the system, are typical features of the liberal theory of international relations.

In addition, another fundamental element of the liberal tradition of thought in international relations is represented by its pluralism for what concerns the levels of analysis and the relevant actors in the system. While realism is essentially state-centric and focused on the systemic level, especially in its most recent versions,[60] liberalism admits the importance of several different types of actors, playing at all levels of analysis. This is first of all due to the fact that liberalism emerges as a political theory according to which the fundamental actors in international politics are individuals and private groups. The preferences and the demands of individuals and societal groups are treated as analytically prior to politics, and states, instead of being considered real, coherent and rational actors, are rather treated as representative institutions, constantly subject to capture by internal coalitions and social actors.[61] This is one of the reasons why the behavior of states in international politics

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[60] Centering on the systemic level is common both to Waltz's neorealism and Mearsheimer's offensive realism, even if these strands reach different conclusions for what concerns the basic attitude of states towards power, its meaning in international relations and fundamental causes of war. See Waltz, 1979; Mearsheimer, 2001.

[61] See Moravcsik, 1997.

will be less uniform than it is assumed by realist theories, since they are influenced by multiple factors other than anarchy. One of these factors, which is able to mitigate the natural anarchy and constrains states in their interactions, is represented by international institutions, another element that increases the pluralism and complexity of the liberal view of international politics. The well-known metaphor of the snooker leaves thus room to the image of a thick web of domestic, transnational and international links.[62]

Even the exact meaning and power of anarchy is different between realism and liberalism. As I mentioned above, the realist conception indicates the absence of a superior authority capable of protecting states from the threats represented by others, thus causing the formation of a self-help system with all its consequences. The liberal version of the concept, instead, points to the absence of a superior power able to punish the deviant behavior of states. This means that states are free to behave in a way that is at odds with the functioning of the international system if this is what their preferences dictate, but they are also free to change their attitude shifting to a more sociable stance. This way of thinking the influence of anarchy, as a tie that is not absolute and grants the states a certain degree of freedom, highlights the importance given by liberalism to change and to the possibility to avoid conflict. The greater degree of freedom and the fact that conflict does not necessarily mark international relations allow states to maximize their absolute advantages, instead of being always concerned about their relative positions.[63] As a result, for liberalism the main

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[62] See Andreatta, 2001.
[63] See Powell, 1991.

obstacles to cooperation are represented by the risks of cheating and free-riding, but not by the possibility that the commercial partner uses its greater relative power obtained by economic cooperation to wage an attack against the state.[64]

Having regards to its posture towards economic interdependence, liberalism can be broadly divided into three branches. First of all, republican liberalism focuses on the nature of domestic political systems to explain the complex variety of international relations.[65] In other words, the behavior of states is far from being uniform and on the contrary it changes accordingly to the mechanisms of representation of individual preferences. For what concerns the issue of interdependence, economic cooperation is in the interest of all states, because it favors the efficient allocation of resources not only among the states, but also within them, thus promoting the economic development of all actors involved. However, the features of internal political systems can intervene and modify the logical consequences that would derive from the acknowledgment of such general interest. This is likely to happen when all domestic political power is in the hands of a small group who could have strong incentives to favor its particular interests against those of the majority, even if such a behavior implies an overall lower degree of economic efficiency and the risks of an eventual political conflict. This body of theory gives rise to the hypotheses according to which democracies are more peaceful and more willing to cooperate in the economic field than autocracies are,

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[64] See Andreatta, 2001.

[65] See Moravcsik, 1997; Andreatta, 2001.

therefore being more likely to trade with each other than they are with non-democratic countries.[66]

The second relevant strand of liberal theory is institutional liberalism, which emphasizes international factors and takes the preferences of domestic social groups for granted.[67] From this perspective, the main obstacles to cooperation and the causes of recurrent conflict among states are due to the consequences of anarchy at the international level. However, such negative impact of anarchy can be reduced if not eliminated thanks to international institutions, which diminish transaction costs and consequently favor a positive attitude of states towards economic interdependence.[68] Institutions create common rules of conduct that put interactions among states in a wider and more transparent context, marked by a longer time horizon; they facilitate detection of antisocial behavior and raise expectations on others' behavior. For these reasons, international institutions should favor cooperation among states independently from their internal political systems. This branch of liberalism generates hypotheses that support the effectiveness of organizations and legal arrangements such as the GATT/WTO, the EC/EU and the various types of preferential trade agreements that are aimed at increasing international trade among their members.

Commercial liberalism, finally, attaches great importance to the economic goals of states and to their influences on

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[66] See Mansfield, Milner and Rosendorff, 2000; 2002; Andreatta, 2001; Russett and Oneal, 2001.

[67] This is the main reason why Moravcsik excludes institutional liberalism from its review of liberal theory. See Moravcsik, 1997.

[68] See above all Keohane, 1984, who is the most outstanding representative of this version of liberalism. See also Snidal, 1985; Keohane and Martin, 1995.

international economic relationships. In the views of the authors who belong to this school of thought, the economic half of international life can help overcoming reciprocal distrust and reducing the problems that originate from international security issues. Individual and collective behavior is explained or at least strongly influenced by the incentives the market provides to domestic and transnational economic actors. Such private actors, in turn, will exert pressure on the national authorities to act in compliance with the market incentives. Even if some groups could press towards a reduction of economic openness and interdependence, on the whole the benefits that stem from international trade should rationally prevail over the risks of getting involved into a war. This is the reason why from this perspective economic interdependence is not a source of danger, but rather an opportunity, and international commerce coupled with an effective international division of labor is expected to lead to peace instead of conflict. According to Kant, it is not necessary to be angels in order to live in peace; it is sufficient that devils are able to count, so that the spirit of commerce, which is incompatible with war, can take the lead in all nations.[69]

The best way to conceptualize the reciprocal connections among these three branches of liberalism is probably looking at the Kantian Triangle elaborated by Oneal and Russett and reproduced in the next page:[70]

[69] See Andreatta, 2001.
[70] See Oneal and Russett, 2001.

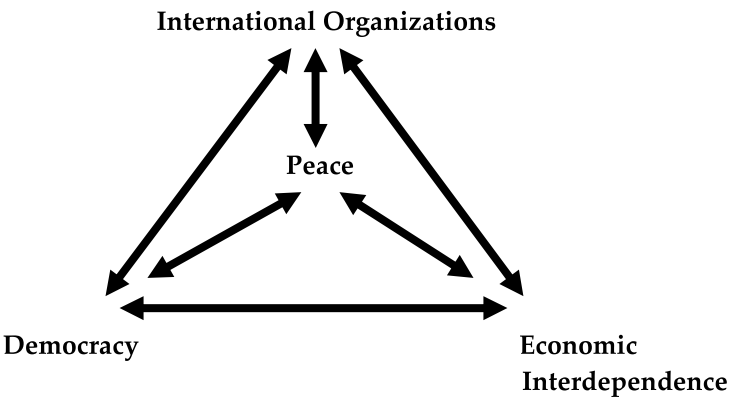

Figure 1: The Kantian Triangle

The arrows linking democracy, international organizations, economic interdependence and peace provide a simple but telling idea of the mechanisms at work in the international system according to the liberal theory of international politics. All three corners of the triangle work in favor of peace, and peace reinforces the stability and the role of all those three liberal goods, creating the virtuous circle which is at the base of the Kantian peace. All those causal relationships are deeply connected to each other, but given the topic of my research I will focus on the implications of the arrows that originate from, or are directed to, the corner of economic interdependence.

Even though the origins of the reflection on free-trade and on the reciprocal influences between international trade and international politics can be traced back to the ancient Greece,[71] Montesquieu was one of the first political philosophers to assume explicitly the positive and pacific effect of international

[71] See Irwin, 1996.

commercial flows on the relationships among states. Montesquieu interestingly divided trade into *luxury* and *economic commerce*, the former being driven by the lives of the courts and the latter by the needs of the people and of the national economy as a whole. The typical good at the centre of the first type of commerce was gold and such version of international trade could stimulate predatory behaviors that could well result into conflicts among nations without bringing any real benefit to the country, if not in terms of prestige. Economic commerce, instead, is stimulated by the real needs of the people and of the nation as a whole. Contrary to luxury commerce, the actors involved in it do not seek short-term gains, but are rather interested in long-term gains and stable economic relations that can improve their economic condition. The positive political consequences of economic commerce are connected to the development of a commercial work ethic that deploys its effects both at the domestic and at the international level.

Most importantly, in the relationships among states the spirit of commerce limits the warlike nature of man. Social conflict is certainly not eliminated, but commercial social relations encourage the formal adjudication of rival claims rather than violent conflict (at least among merchants and between them and the state). The ethic of contracts, that commercial relations can only take place if both parties accept the fundamental rule of performing contacts made, implies a formal-legal procedure. Merchants seek gain according to their own self-interest. Yet they recognize the necessity of the mutuality of their condition – that the self-interests of other merchants are also legitimate. The Hobbesian analogue of international relations as a state of war is undermined by Montesquieu's view. Within a system based upon the self-interest of states exists a pre-established ethical system based upon the sanctity of contracts.

For Montesquieu the ethic of contract establishes far stronger social and moral bonds than the sovereign's power ever could. The ethical interactions of merchants could explain far more of the development of the international system than could the pure power politics of the Hobbesians. A peaceful universe could emerge out of the cosmopolitan ethic of the merchant class. Within the international commercial system, amity and peace, not war, must reign. The mutual dependence of states requires a consciousness that Europe's shared destiny is in increased dependence. Contractual ethics are inconsistent with war and if nations want to benefit from the international economy, relations among merchants must be predictable.[72]

In "The Inquiry into the Nature and Causes of the Wealth of Nations" Adam Smith elaborated such a powerful system in defense of free trade and against mercantilist economic policies that his thought became the base of the free-trade system adopted by the British Empire in the XIX century. He strongly believed that the increased volume of economic exchanges that derive from a general system of free trade and the consequent pressure towards an international division of labor was a major benefit for all countries, even in terms of national power and security. He derided the mercantilist belief that the prosperity of other nations conflicted with England's welfare, since the contrary was true: every nation benefits from the advancement of every other nation.[73]

"If a foreign country can supply us with a commodity cheaper than we ourselves can make it, better buy it of them with some part of the produce of our own industry, employed in a way in which we have

[72] See Montesquieu, 1989; Rosow, 1984; Howse, 2006.
[73] See Irwin, 1996.

some advantage. The general industry of the country, being always in proportion to the capital which employs it, will not thereby be diminished,[…]*but only left to find out the way in which it can be employed with the greatest advantage. It is certainly not employed to the greatest advantage when it is thus directed towards an object which it can buy cheaper than it can make.”*[74]

Trade and industry promote order and good government, so that in Smith’s opinion, as well as in the opinion of the other commercial liberals, economic interdependence is conceived as an opportunity cost in case it is not pursued, rather than an eventual adjustment cost in case it is broken after its achievement. He claimed that mercantilist policies favor only particular interests of small privileged groups, while free trade favors the circulation of wealth for all individuals and private groups, so that these actors, embodying the real essence of nations, have a strong interest not only in supporting a high degree of interdependence, but also in increasing it progressively.[75]

However, though being a sincere free trader, Smith was also aware of the risks of international politics. He perfectly knew that states constantly live in a situation of latent conflict and for this reason he acknowledged that the first duty of sovereignty is “protecting the society from the violence and invasion of other independent societies…by means of a military force.”[76] In this light, Smith was not against tariffs and trade barriers if they are required by national security reasons and aimed at the protection of military-related industries. On the

[74] See Smith, 1993.
[75] See Wolfers and Martin, 1956.
[76] See quot. in Earle, 1986.

contrary, he explicitly declared that a nation should depend as little as possible from other countries for what concerns security-related goods and he also admitted that other industries could be taxed for the explicit purpose of supporting domestic military industries.[77] Nonetheless, in the modern world the fundamental base of national power is a nation's economy and its productive capacity, so that tariffs and barriers can be considered tactical measures that sometimes emerge as necessary from the current situation of international interactions, but the fundamental strategy is clear and it cannot be different from free trade.[78]

A similar view on the implicit pacific effects of commercial relationships was held by John Stuart Mill, who maintained that with the advent of a general system of free trade war would have become obsolete. The achievement of such a situation is possible because as trade spreads its advantages within and across countries, interests opposing war multiply and grow increasingly stronger, so that at a certain point waging war is simply too difficult, since everyone has a lot of real benefits to lose and only eventual and risky gains to get.[79]

However, in the XIX century the strongest support to the theory according to which trade can really be the way to change the nature of international relations and favor the development of the international system towards a stable peace was given by Cobden, Bright and the so-called Manchester School. In his works Cobden harshly opposes any form of war and armed intervention in the affairs of other states, if not for strict reasons of self-defense. He claims that not only international commerce

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[77] See ibid.
[78] See Irwin, 1996
[79] See Hirschman, 1980; Andreatta, 2001.

can change the posture of states towards each other because it stimulates powerful interests adverse to war, but also because it can cause a general change from a moral point of view.[80] Cobden believed that the only way for a nation to increase its welfare was by increasing its productivity and improving its government, fostering the accumulation of capital and the expansion of freedom. These developments also serve to increase national power, since he shared Smith's conception that power ultimately rests on wealth. In his view, the best way to promote a nation's prosperity is *laissez-faire* at home and free trade abroad, since "the intercourse between communities is nothing more than the intercourse of individuals in the aggregate".[81] He maintained that most wars were fought for mercantilist ends, but the experience of free trade teaches the world that there is a basic agreement between the economic interests of a single country and those of the world as a whole.

He maintained that in the age of ancient empires, wars of conquest could pay because people were counted as nothing and the convenience of those expeditions was measured with regards to the condition of a small group of persons, but now such wars do not bring any advantage anymore. In the modern era simple people have increased their power and their economic condition, so that in case of invasion they are ready to fight in person in order not to lose the material and immaterial goods they enjoy in their country. On the other hand, if the wealth and the strength of a nation have to be measured with regards to the condition of all its citizens, the best way to increase them is embracing the liberal capitalist organization of the economy. The politicians

[80] See Waltz, 1959.
[81] See quot. in Wolfers and Martin, 1956.

and the diplomats who were still stuck to the concept of the "balance of power" were wrong both on practical and on theoretical grounds. From a practical point of view, they did not take into account that in the modern age the power of a nation does not have to be measured by its current army, but rather by its latent economic power and its productive capability, which can be really increased only through authentic capitalist policies. From the theoretical point of view, instead, they did not understand that the whole concept of balance of power becomes obsolete when the countries of the system discover the benefits of free trade and the fact that the best way they have to increase their wealth is keeping close commercial ties with the other members of the system.[82]

At the beginning of the XX century, Norman Angell summarized the works of the liberal economists that had come before him in the book that was bound to be considered the political manifesto of this strand of liberalism.[83] He was a rationalist and individualist in the classical XIX-century sense and he shared and strongly supported the rational position according to which war does not produce any gain for states. On the contrary, it is peace that matches the real interests of all states and for this reason waging war cannot but be an irrational decision that has to be corrected through education and the diffusion of the knowledge achieved by liberal thinkers. In war, if everything works properly men are prevented from working and producing basic essentials as well as comfort goods; if everything goes wrong, instead, war destroys also the goods they had already produced. War can redistribute resources, but

[82] See Wolfers and Martin, 1956.
[83] See Angell, 1911.

it is only working that wealth can be generated, not fighting other countries. War could have been profitable for a country or a tribe, but certainly not for the whole humanity, that was Angell's and all other liberals' ultimate reference point.[84]

The essence of his well-known "unprofitability of war" thesis was that the most important states of Europe had become so interdependent that war could no longer serve their economic interests. The great illusion cited in the title of the book was represented by the belief that a state, through successful military action, could secure new sources of raw materials, or access to new markets, or could seize territory from a bordering state and incorporate its wealth. The enormous financial and human costs provoked by World War I proved that Angell's core thesis was correct, since interdependent states cannot fight each other militarily without incurring in severe loss and the more interdependent the states, the greater the cost of military conflict. Contemporary liberals have stressed that he focused on economics and on economic profitability, without claiming that war had become impossible.[85] Nonetheless, his faith in rationality and in the thesis he advanced was so strong that the latter extreme view of the benefits of trade often seems to enter the pages of Angell's book.

Needless to say, the outbreak of World War I three years after the publication of "The Great Illusion" demonstrated that war was still possible, but it showed also that labeling as irrational mistakes the decisions of states to fight a war founding such opinion only on economic grounds was a bit simplistic. On the one hand, if it is possible to define the concept of national

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[84] See Waltz, 1959.
[85] See Moravcsik, 1997; Oneal and Russett, 2001.

interest, it is certainly a multidimensional concept, so that economic profitability is only one of the reasons why states can decide to resort to armed force. On the other hand, even the harmony of economic interests among states postulated by liberals is not always as evident as it was in a period of general growth like the XIX century.[86] Paradoxically, the same advantages of industrialization and free-trade policies that increased the wealth and power of Britain favored even more its competitors, which were able to close what seemed to be a structural gap.[87] The resulting relative decline of Britain led the major powers to a situation of reciprocal suspicion and triggered a competition for power that was at the base of World War I, allowing realist authors to reaffirm the primacy of politics in international affairs.[88]

Summing up, classical and contemporary proponents of the trade-promotes-peace proposition identify several interrelated theoretical reasons in support of their hypothesis, but give greatest emphasis to the economic-opportunity-cost argument based on the benefits of specialization and efficiency. Because trade exploits comparative advantages and generates economic benefits for both parties, the anticipation that war will disrupt trade and lead to a loss or reduction of the gains from trade creates incentives to political leaders to avoid taking

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[86] Copeland, 1996 argues that the pacific effect of trade is related to the *expected* rather than current level of interdependence among states, so that the overall condition of the global economy can influence the economic costs deriving from war. He maintains that at the outbreak of World War I the great powers shared a general expectation that economic interdependence would decline in the future, reducing the economic-opportunity costs of war.

[87] See Kennedy, 1988.

[88] See the classics Carr, 2001; Morgenthau, 1985.

actions that are likely to lead to war against key trading partners. This opportunity-cost mechanism is reinforced at the domestic level. Trade increases the influence of economic groups who benefit most from trade and who have incentives to pressure the government to maintain a peaceful environment for trade. Lower levels of trade reduce the economic opportunity costs of war and reduce economic incentives for political leaders to avoid war.[89]

Similarly to what has happened on the realist side, even the basic liberal assumptions on the ways states look at absolute instead of relative gains have been recently formulated in more formal and accurate ways. The fundamental result of this debate is that although some basic divergences persist, contemporary realist and liberal views on the viability of economic cooperation and on the consequences of economic interdependence agree on several points and proceed towards an integration of the two approaches to explain the complexity that characterizes current international politics. Snidal acknowledges that in cases of two-states interaction, with high concern for relative gains and near disregard for absolute gains, the realist case is actually compelling. Nonetheless, in his opinion relative gains do not pervade international politics to a sufficient degree to make the realist position hold in general. Trying to address situations that he considers more realistic, marked by the presence of more than two states that care about a mixture of relative and absolute gains, he uses the game theory approach to reach the conclusion that an increase in the number of actors strongly decreases the impact of relative gains in impeding cooperation.[90] Clearly, this "softening effect" is reinforced by interaction with a relaxation of

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[89] See Levy, 2003.

[90] For slightly different reasons, this conclusion is reached also by neorealism. See Grieco, 1993.

the hypothesis postulating a total concern of states for relative gains.[91] Snidal assumes that cooperation in general, and therefore also economic cooperation, generates "constant returns" for actors, meaning that gains from cooperation are proportional to the size of the involved states and are shared equally between them. This situation can be probably better conceptualized as a special case than as the norm, partially weakening its criticism of the realist case.[92] However, he admits that if the realist approach seems to work only in quite rare and difficult situations, liberals have often underestimated the difficulties of cooperation in cases with a small number of relevant actors.[93]

Robert Powell, in turn, elaborates a highly stylized model of interaction between states that achieves a high degree of integration between neorealist and neoliberal hypotheses.[94] He recalls that according to the neoliberal analysis the shadow of the future may lead egoistic states hypothesized in structural realism to cooperate, since repeated interaction gives each actor the ability to punish uncooperative behavior today with future sanctions. Since implementing the threat to punish deviation is in the threatening state's own interest, the achievement of cooperation does not require that some external authority exists to implement threats or promises. The shadow of the future therefore seems to make cooperation possible even in an anarchic system, but Powell admits that these liberal models formalize the role of force very badly, failing to meet the realist understandings of international politics. For this reason, he elaborates a structural model where the use of violence is

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[91] See Snidal 1991.

[92] For harsh criticism of this assumption see Grieco, 1993.

[93] See Snidal, 1991.

[94] See Powell, 1991.

explicitly taken into account and in this way he recognizes that cooperation collapses when the use of force is at issue, but becomes possible when the cost of war is sufficiently high that the use of force is no longer a viable option.

In this perspective, the general problem faced by a state can be defined as a constrained optimization in which the units are trying to maximize their absolute level of economic welfare subject to a set of constraints in which a unit's current relative gain may be translated into a future absolute gain for that actor and a future absolute loss for the other actors. If opportunities to exploit relative gains exist, then the absence of a common government to ensure that the states do not exploit these opportunities may impede cooperation, but absent these opportunities that validate the realist case, cooperation in general and in the economic field in particular is possible even under anarchy. Among other things, Powell's model therefore criticizes the idea that neorealist conclusions are necessarily based on the assumption that a state's utility is at least partly a function of relative gains. Nonetheless, it is explicitly designed to move towards an understanding of international relations according to which different arguments that descend from opposite traditions of thought work together to provide a more careful and detailed picture of current complex international politics.[95]

Commercial liberalism thus emphasizes the role of economic interdependence *per se* and the importance of absolute gains in comparison to the realist logic of relative gains. From the viewpoint of this strand of liberalism, increasing the economic

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[95] On the necessity of this progress see Snidal in Grieco, 1993.

flows that connect two states is not only a viable option, but also a mutually beneficial policy that increases national wealth and reduces the risks of war. According to realism, vulnerability is a danger that has to be avoided and a problem that has to be solved as soon as possible. Liberalism, on the contrary, maintains that vulnerability alerts states to the danger that conflict implies, pushing them towards moderation. In a realist world, states are sensitive to the risks for their security, while in a liberal world they are mainly sensitive to the costs for their wealth. These theoretical traditions address the same problem from two opposite perspectives, which depend on different conceptions of human nature and social and political interactions.

Republican and institutional liberalism, however, introduce relevant specifications to the theory advanced by commercial liberalism, assuming that the other two corners of the Kantian triangle impinge on the relationship between economic interdependence and peace creating contexts that are particularly favorable for the development of economic interdependence. Republican liberalism supports the idea that a higher degree of economic interdependence should be present between democratic states, because democracies are likely to be at peace with one another and for this reason a democratic trading partner should feel its security less threatened by another democratic state than by many autocracies. If a country does not worry that the other will use its relative gains to threaten the partner's security, they can enter into relationships of economic interdependence for the absolute benefits of trade, particularly an improvement in the standard of living, without worrying much about which state gains more. In addition, the absolute gains that result from trade between two democracies increase their security vis-à-vis potentially hostile third parties. Democratic states may construct policies to encourage their private economic actors to trade with those in other democracies, with whom political relations are stable and peaceful. Since entrepreneurs in democratic countries have reason to believe that shared democracy promotes peace, they can anticipate less risk of interference in their business from war or threats of war when dealing with economic agents in a democratic country. Moreover they are likely to be more confident in the business practices and laws in another democracy than in those in an autocracy, where expropriations and capricious taxation may threaten their physical or intellectual property. It is hard to distinguish the relative strength of the various mechanisms by which public and private actors preferentially promote trade between democracies, because their motives are related and are often complementary. In this case institutional arrangements reinforce private preferences.

Institutional liberalism, instead, stresses the role of international organizations in promoting economic interdependence among their members. Like other institutions, international organizations serve various purposes. These range from acting in a quasi-supranational capacity to enforce established agreements, through facilitating members' pursuit of their individual self-interests in ways that are consistent with their common cause (a standard liberal understanding of the role of institutions), to "teaching" a set of norms that may sharply revise state's conception of their interests and preferences.[96] Liberal authors highlight that some international organizations can use coercion to maintain or restore peace among their members. This is a characteristic of the United Nations, even though realism tends to reduce its importance and underlines its

[96] See Oneal and Russett, 2001.

complete inefficacy absent the will of the major powers to act in that sense.[97] However, if one considers NATO and the Warsaw Pact collective security organizations rather than alliances, such possibility becomes reality.[98] A second relevant function of international organizations is their ability to adjudicate or arbitrate disputes, thus reducing the cost of enforcing contracts, encouraging their creation and promoting exchange. A major function of international organization, then, is their capacity of processing and transmitting information, solving problems and transmitting capabilities reducing transaction costs. From this point of view, international organizations are potent means to reduce the consequences of uncertainty inherent in international anarchy, to solve or at least strongly limit the risks of cheating and to identify promptly eventual free-riders.[99] In addition, "international organizations may provide arenas within which actors learn to alter perceptions of interest and beliefs".[100] Institutions with responsibilities in several areas create the possibility of linking negotiations on one issue to others, permitting trade-offs and side payments that facilitate agreement.[101] Liberals also claim that communication and common norms can create common interests and facilitate cooperation through socialization, since mutually beneficial interaction and adherence to common norms can project states into a less selfish dimension, progressively acknowledging some of others' instances as if they were their own. This latest set of hypotheses clearly refers to Deutsch's studies on the viability of

[97] See Mearsheimer, 1994.
[98] See Oneal and Russett, 2001.
[99] See Keohane, 1984.
[100] See Caporaso, 1992.
[101] See Keohane, 1986; Martin and Simmons, 1998.

building shared identities through transactions and it has been recently updated in several important works.[102]

In summary, the various versions of liberalism not only assume that economic interdependence is possible and beneficial for states, but they also formulate hypotheses on conditions that should favor the development of such interdependence. The liberal hypotheses that have been tested in empirical studies therefore stress that for multiple reasons a higher degree of interdependence should be present among democratic states and among members of international organizations, especially if such organizations are designed to have a direct influence on international economic matters.

1.4 Assessing Interdependence among States

Following centuries of deep and intense philosophical debate on the relationships between international politics and international economics, after World War II several researchers have faced this issue from an empirical perspective, mainly applying qualitative methods to produce comparative research or analyses based on case studies. Nevertheless, only in the last twenty years profound and punctual quantitative studies have carried out the effort of matching theories with empirical data, with the aim of investigating the subject matter under scrutiny on a broader basis. The aim of these research projects is typically twofold: to draw a general picture of the dynamics that characterize economic interdependence at the international level and evaluate the relative causal strength of the variables

[102] See Deutsch et al., 1957; Wendt, 1994; Adler and Barnett, 1998.

involved in this phenomenon. The effort of assessing the relevance of classical and contemporary theories of economic interdependence has led to the introduction and the development of quantitative methods in the field of international relations, reinforcing the subfield of international political economy and establishing a valuable link between the disciplines of political science and economics, which unfortunately often fail to communicate efficiently and fruitfully. In the present section I will introduce the results of the studies that have examined the influence of political variables on economic interdependence among states, leaving to a final separate section the succinct analysis of those studies that have applied the opposite strategy of exploring the action of economic variables on political outcomes at the international level. Such works, albeit not directly related to my research topic, provide some useful insights which can help us to complete our knowledge of the respective contribution of the main contrasting theories, most notably liberalism. Even though the pieces that I am going to consider raise some significant methodological issues, I will not address them directly here, since there will be a section dedicated to methods at the beginning of the empirical part of this thesis.[103]

1.4.1 Economy as the Dependent Variable

Among the empirical studies that have analyzed the influence of political variables on the level of economic interdependence focusing on relational variables, interesting results have been obtained by Pollins, thanks to the inclusion of

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[103] See chapter 2, p. 114.

an indicator of diplomatic relations between trade partners in the gravity model for international trade.[104] In these articles which represent the dawn of this stream of literature, he finds that in the '60s and the '70s international conflict and cooperation affected international commerce in a significant way: importers and exporters were well aware of the security concerns associated with international economic flows, as well as of the different risks of trading with friends and adversaries of their home countries.[105] For the first time, an effort is made to address in the most explicit way the eventual influence of variables belonging to the relationships' level of the international system on the degree and the forms of economic interdependence among states.

The relationships' level has been defined by Glenn Snyder as a semi-systemic level of the international system where variables such as alliances, degrees of economic dependence/interdependence or degrees of polarization define the situational contexts within which the interactions among states take place.[106] These contexts are not neutral, but exert independent effects on the behavior of the actors. They embody sub-systemic causal levels of analysis that reciprocally affect each other; thus, they are conditioned by the structure of the system, which constrains and enables state behaviors and interstate relationships, but alone doesn't determine the outcomes.[107] Relationships are not models of interactions, but rather the background against which interactions take place. These elements of international reality not only transmit

[104] See Pollins, 1989a; 1989b. On the gravity equation, chapter 2, p. 100.
[105] See Pollins, 1989a.
[106] See Snyder, 1996.
[107] See Waltz, 1979; Schweller and Priess, 1997; Costalli, 2007.

pressures deriving from unit attributes and structure, but also exercise autonomous influence on the behavior of the actors.

The index constructed by Pollins to quantify the degree of conflict and cooperation between two states in a given year can be perfectly included in the framework designed by Snyder's attempt to refine and update the neorealist theory of international politics, since it is a composite measure of the diplomatic actions taken by the components of the dyad towards each other, which are given a value in terms of cooperation/conflict.[108] This inherently relational variable expresses in quantitative terms the general foreign policy orientation of one state toward another and allows Pollins to prepare a model of bilateral trade flows where importers are utility maximizers who seek to satisfy both their international security and economic welfare objectives. According to the results presented, the current state of affairs between two countries significantly affects their economic relationships in a direct and continuous way, in the sense that importers are more favorably disposed to be dependent on the goods coming from friends than from those which help their enemies get richer and stronger.[109]

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[108] The formula to calculate the index is represented by the equation $W_{ij} = C_{ij} \times C_{ij}/(C_{ij} + H_{ij})$, where W_{ij} stands for "Weighted Cooperation" sent by country i to country j; C_{ij} is the amount of cooperation sent by country i to country j and H_{ij} is the amount of hostility sent by the same initiator to the same target. See Pollins, 1989a.

[109] An interesting recent study which recovers Pollins' ideas is Kastner, 2007. Kastner focuses on the effects of conflicting political interests among states on international trade and verifies both qualitatively and quantitatively that when internationalist economic interests are strong in domestic political systems, the effects of conflicting political interests on commerce are less severe. In this way

Putting to the test his utility function, Pollins expands the classic economic conceptualization of "welfare" to include traditional security strategies of states such as rewarding friends, punishing enemies and minimizing risks. In this way, he is able to show that in the decades considered states tended to react to changes in their relationships with trade partners by means of interventions designed to politically manage the trade flows that linked them. In addition, he is able to distinguish the postures adopted by different countries towards international trade, analyzing the behavior of single importers towards many different exporters. [110] Thanks to this research strategy, he finds that states which were less integrated in the world market, and which used to manage trade relations in a marked direct way, perceived the forces of international economy as a threat to their objectives of political development. As a consequence, they were more sensitive to changes in the level of conflict/cooperation than those states that were more integrated into the world economy. In other words, socialist and developing countries, where the central government used to play an important role in the national economy, exhibited more sensitiveness to the degree of conflict/cooperation they had with their commercial partners. In such countries foreign economic activity used to be more tightly tied to their general foreign policy objectives and behaviors than it was in western capitalist countries, which were more integrated in the world market, but still didn't renounce to politically manage trade flows.[111]

Kastner tries to build a bridge between the literature on the domestic determinants of foreign economic policy and the literature on the effects of international political conflict on trade.

[110] See Pollins, 1989b.

[111] See ibid.

Gowa and Mansfield have developed Pollins' ideas and theoretical hypotheses structuring them in a more formal way, thus using more solid indicators to put them to test.[112] They recast the optimal tariff game between two states, usually represented as a prisoner's dilemma, to take into consideration the security externalities arising from international trade flows. In an anarchical international system states have to be always aware of their relative power and for this reason the payoff matrix standing in front of two allies that have to decide whether to trade freely or to impose a tariff is different from the one that is faced by two adversaries in the same situation. In the case of trade with an adversary, a state incurs a marginal cost that can be represented as an increasing function of the adversary's gains from trade and that is not reflected in the standard matrix.[113] The inclusion of this social cost corresponding to a fraction of the adversary's gains from trade has the effect of making tariff games between adversaries more difficult to solve, since the condition that has to be satisfied to achieve free trade in case the game is iterated is more demanding than the condition that emerges from an optimal tariff game among states with independent utility functions. On the contrary, trading with an ally engenders positive security externalities, since the increased wealth and power of the ally/trading partner indirectly increases the security of our state. The country under scrutiny continues to maximize its utility calculating not only private, but also social returns from trade as it used to do in the former case, but this time it internalizes a benefit instead of a cost, so that satisfying the condition for free trade will be easier than it is in both previous situations.

[112] See Gowa and Mansfield, 1993.
[113] See Powell, 1991; Gowa and Mansfield, 1993.

Gowa and Mansfield undertake the first empirical analysis of the influence of alliances on international trade taking into consideration bilateral trade flows among the great powers from 1905 to 1985. They include a dummy variable indicating the presence of an alliance between the two states that compose the dyad and estimate the gravity equation through a series of cross-sections, finding that alliances have a direct and statistically significant effect on bilateral trade. Hence, their results support the hypothesis that allies are more likely to trade with each other than with non allied states. Alliances, however, do not have always the same strength, since they are not always equally reliable. The risk of exit, that is, the threat that one of the actors will abandon an existing alliance to join an alternative one, is determined by various factors lying at different levels of analysis. One of these factors at the structural level is the polar configuration of the international system:[114] bipolar coalitions are the product largely of system structure, while alliances in a multipolar system are the results of choice among several possible alternatives.[115] This different genesis along with the different possibilities of realignment for the state who wants to leave the alliance makes such pacts more stable and reliable if they are formed in a bipolar world than in a multipolar one. That is, the security externalities of any free-trade agreement are more likely to remain internalized within the alliances of the former system than in those of the latter.[116] As a consequence, free trade is more likely to emerge within the alliances of a bipolar than in those of a multipolar system. In fact, the empirical results show

[114] On other factors influencing alliance reliability, see Leeds, Long and Mitchell, 2000; Leeds, 2003.

[115] See Snyder, 1984; 1997.

[116] Joanne Gowa had already presupposed a different effect of alliances on trade in bipolar and multipolar systems some years earlier in Gowa, 1989.

that the effects of alliances on trade have been greater after rather than before World War II.[117]

Following the same reasoning, Long analyzes the dyadic trade flows among the great powers from 1885 to 1990 and adopts the new Alliance Treaty Obligations and Provisions (ATOP) dataset, which has been realized dividing alliances into several categories having regards to the general obligations of the members.[118] He stresses the importance of the type of obligation undertaken by the members of the treaty, questioning the choice of previous empirical research design to operationalize alliance including in such concept defense pacts, neutrality and no-aggression pacts and *ententes*. Long acknowledges the arguments presented by Gowa and Mansfield to explain the attempts of states to direct economic flows towards friends instead of adversaries, but he adds another reason why alliances can increase international trade. Such reason is located at the micro level and takes into consideration the fact that exporting firms often engage in relation-specific investments abroad, that can hardly be redeployed without sacrifice of productive value.[119] Those firms are exposed to opportunistic behavior by host governments, but such governments have far less incentives to behave opportunistically and disrupt trade relations if firms come from allied countries. Therefore, firms that wish to maximize the expected profitability of their investments by avoiding opportunism are expected to invest in allied markets.

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[117] See Gowa and Mansfield, 1993.
[118] See Long, 2003.
[119] See Williamson, 1985.

Claiming that military alliances cannot be expected to have identical influence on state behavior and therefore, indirectly, on international trade, Long separates defense pacts from non-defense pacts, defining the former as those agreements implying commitments to provide military assistance to the members in case of armed attack. In a certain way, he considers defense pacts to be the "real alliances", so that both the macro and the micro explanations should be valid only in presence of this type of agreements. The results of his quantitative analysis show that while non-defense pacts and alliances, defined in the usual extended way, do not seem to exert any significant effect on bilateral trade flows, the presence of a defense pact between the components of the dyad appears to increase the value of their trade of about 20%.[120] Nonetheless, somewhat paradoxically, the political variable that exercises the strongest effect on trade in Long's study is not a form of alliance, but rather a feature of the states, a variable situated at the unit level of analysis: democracy. While Gowa and Mansfield do not find any influence of democracy on bilateral trade flows, in Long's research the presence of a democratic regime in both countries of the dyad stimulates trade with significant and positive consequences.

This branch of literature is particularly focused on relational variables and especially on alliances and is more sensitive to the hypotheses of the realist tradition; on the other hand, several other studies have stressed the influence of unit level's variables on international trade and principally of democracy, following the classical liberal paradigm of international relations. Dixon and Moon have made the first attempt to verify if the similarity of internal regimes has any

[120] See Long, 2003.

consequence on bilateral trade flows. They conduct a study on the foreign economic relations of the United States between 1966 and 1983, according to which American exports are more likely to achieve success and widespread diffusion in countries characterized by political systems and foreign policy orientations which are similar if not perfectly congruent with those of the exporter country.[121] In the same vein, Bliss and Russett draw upon a body of data that includes between 882 and 1042 pairs of states in the period 1962 to 1989 to assess the extent to which shared democratic political institutions have an effect on trade between states.[122] Though they use a broader sample of states and employ different control variables, they arrive at results fully consistent with those of Dixon and Moon: democratic states trade more with each other than they do with states that have other types of political systems. A particularly interesting feature of this latest study is the fact that the authors include in their model also the presence of an alliance between the states which compose the dyads as a control variable, but such variable fails to reach any significant level in all the years taken into consideration by the cross-sectional analyses carried out by Bliss and Russett.

This result is exactly the opposite of the conclusions reached by other studies on the same topic, but this phenomenon happens quite often in this field, for a number of reasons. Partly, this is due to the development of more refined and appropriate econometric methods, so that similar research strategies could bring to different conclusions. Very often then, the models tested are similar but not exactly equal, therefore omitting or including

[121] See Dixon and Moon, 1993.
[122] See Bliss and Russett, 1998.

a relevant variable can cause or solve problems of model specifications leading to different results. Besides, the variable "time" has to be given careful attention: including different years in the studies can bring unexpected consequences, since the international system does not change only in correspondence of extraordinary events such as World War II or the end of the Cold War, when the whole structure of the system radically changes. The international system changes every day, at least in some of its features, even though some logics and some basic characteristics remain valid. For this reason, analyzing different time spans is not without consequences, even if such consequences are often overlooked. However, we have to be careful not to overemphasize the contradictions inherent in these studies, since, as it will result at the end of this thesis, the relationship between international politics and international economics is very complex and far from being characterized by simple and linear causal relationships.

For what concerns the theoretical reasons why democratic states should trade more among themselves than they do with autocracies, such reasons are fundamentally linked to the fact that a democratic regime should be able to provide a more secure and stable environment for foreign firms than a non-democratic one does. Firms considering foreign trade must assess the political risks posed by the domestic institutions of the countries in which they deal. The presence of open polities and independent judiciaries makes it difficult for democratic governments to violate the property rights granted to foreign actors in order to favor a particular group or power block.[123] On the contrary, autocracies are considered less predictable and

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[123] See North, 1990.

more capricious, so that the risks of expropriations and sudden policy changes are much higher.[124] In addition, since entrepreneurs in democratic countries have reason to believe that shared democracy may decrease conflict, they may justifiably anticipate less likelihood of interference in their international business from war or threats of war when they are dealing with a democracy than with a non-democracy.[125]

In line with the results achieved by Bliss and Russett, Morrow, Siverson and Tabares confirm the significant and positive effect exerted by the presence of a democratic regime in both countries of the dyad under scrutiny through an analysis of bilateral trade among the major powers between 1907 and 1990.[126] While they do not find any relevant influence of alliances on international commerce, neither during periods of multipolar configuration nor under bipolarity, they argue that similar foreign policy interests guarantee more trade and show that these results are robust to various different checks. In practice, this study can be considered an attack to realist theories supported by empirical data, claiming that security concerns do not lead states to control their trade flows and considering private economic agents as the only relevant actors of international trade flows.[127]

Mansfield, Milner and Rosendorff elaborate a formal model based on game theory to provide another reason why democratic dyads should trade more than mixed ones.[128] The

[124] See Olson, 1993.
[125] See Bliss and Russett, 1998.
[126] See Morrow, Siverson and Tabares, 1998.
[127] See ibid.
[128] See Mansfield, Milner and Rosendorff, 2000.

basic distinction they trace between democracies and autocracies for what concerns commercial relations is that while in autocratic regimes the executive embodied by the autocratic leader is free to decide the national trade policy, in a democratic context the executive has to bargain with the legislature to find an agreed solution. In a "take it or leave it" game (TILI), where one actor makes an offer and another actor has to decide whether to take it or not, both actors want to lower the trade barriers of the other to increase their own national welfare. Since the Nash equilibrium of non-agreement is worse for both countries in the case of two democracies than in the case of mixed dyads, the executives and the legislatures that want to remain in office will have sufficient incentives to find a compromise and lower their own barriers, thus avoiding a trade war. In this model democratic legislatures are considered to be more protectionist than their respective executives since legislators represent smaller constituencies than the chief executive and are more easily captured by special interests than the executive.[129] In this situation, the executive of actor A, being concerned for the veto that actor B's legislature could pose, moves to a freer trade equilibrium than in the case of mixed pair, when it could bargain directly with the only decision maker of actor B's trade policy. Paradoxically, protectionist legislatures push democracies to lower their trade barriers more than otherwise. This model, however, is not able to distinguish between the behavior of presidential and parliamentary democracies, as well as to compare the expected trade barriers within an autocratic dyad with those of a democratic one, since the result of the autocratic bargaining depends on the specific preferences of autocrats. The econometric results, nonetheless, confirm Mansfield, Milner and Rosendorff's hypotheses, since

[129] On this point see also Rogowsky, 1987; Mansfield and Busch, 1995.

democratic pairs seem to trade about 20% more than mixed pairs, while no particular difference is found between autocratic and democratic dyads.[130] Contrary to previous studies focusing on democracy, this one underlines that probably the relationship between realist and liberal theories of economic interdependence is more complex than one would expect, since also alliances are found to exert significant and positive effects on trade.

From a slightly different but connected perspective, Milner and Kubota have recently studied the effect of democratization on trade liberalization, shifting from a static to a dynamic understanding of the effects of democracy on trade.[131] They link globalization and the progressive diffusion of free trade to the third and fourth waves of democratization that started in the late seventies to end in the nineties,[132] claiming that the two phenomena are strictly related. According to Milner and Kubota, democratizing states tend to promote lower tariff barriers and freer trade because new democratically elected political leaders have to gain the support of larger constituencies, which include entire sectors of the society that were previously excluded from the possibility of influencing national economic policies. A regime that has to take account of voters who have not previously had voice may well shift the allocation and distribution of resources,[133] so that democratization is important

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[130] In another study, Mansfield, Milner and Rosendorff propose a different way to assess the incentives of democracy towards international economic cooperation. In fact they find that democratic dyads are more likely to sign preferential trade agreements, which, in turn, stimulate trade among their members. See Mansfield, Milner and Rosendorff, 2002.
[131] See Milner and Kubota, 2005.
[132] See Huntington, 1991; Whitehead, 2001.
[133] See Bienen and Herbst, 1996.

for trade policy because the optimal level of protectionism for political leaders is a declining function of the size of the winning coalition. Even if the same political leaders remain in office, an expansion of the winning coalition reduces the amount of protection that is optimal for them. Developing countries by definition possess relatively less capital than labor. Because the vast majority of their trade is with rich developed countries, their import-competing sectors tend to be capital-intensive, and therefore protectionism will benefit those individuals well endowed with the relatively scarce factor, capital. Liberalizing trade policy in the LDCs results in a gain in income for, and a reduction in the prices of imported goods bought by, those well endowed with the relatively abundant factor – that is, labor – in these economies. In developing countries, workers and the poor tend to gain from trade liberalization through increases in their income and reductions in the prices they must pay (especially for import-competing goods). The empirical analysis of a panel composed of about 100 countries between 1970 and 1999 supports Milner and Kubota's predictions, since increasing degrees of democracy foster progressively lower tariff rates. The results are robust to different measures of the regime and to the inclusion in the model of several economic and political control variables which could affect the trade policies of LDCs.[134]

Other relational variables which are less connected to international security issues than alliances, being institutional devices created mainly to promote economic cooperation, but which are often included in political analyses of international trade flows, are represented by preferential or regional trade agreements (PTAs), GATT and WTO. Membership in these

[134] See Milner and Kubota, 2005.

institutions is often used as a control variable in models where the central focus is represented by other issues, but they have nonetheless their own importance and in the last years they have acquired a stable position in the gravity models of international trade. The history of modern international economic relations is marked by many legal frameworks designed to reduce uncertainty and achieve economic cooperation and in fact researchers have taken them into account studying different periods and contexts. If Eichengreen and Irwin investigate the influence of currency blocks and trade blocks in 1930s,[135] the major part of these studies attempts to shed light on the political and economic dynamics of post-World War II international system, thus focusing on the GATT/WTO framework, on the EC/EU and on the many preferential trade agreements that have been signed around the world especially in the last twenty years.[136] These legal arrangements are usually found to stimulate trade among their members, even though not all of them seem to have the same effectiveness and the security issues appears to play a role also in connection to these institutions. On this last topic, Mansfield and Bronson highlights that if both alliances and preferential trade agreements increase trade among their members, states that are parties to both kinds of institutions engage in markedly larger trade than those that are members of only one of these arrangements.[137]

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[135] See Eichengreen and Irwin, 1995.

[136] Mansfield, 1998 finds empirical support to the hypothesis that eroding hegemony, economic recessions and strategic interdependence are fundamental variables to explain PTAs diffusion, since all those phenomena prospect future commercial closure. To avoid such closure and preserve their access to important markets, states have strong incentives to enter PTAs.

[137] See Mansfield and Bronson, 1997a; Mansfield and Bronson, 1997b.

As regards the multilateral system embodied by GATT/WTO, generally considered and also found to be an effective means to boost trade, Rose has recently put into question its role through a very accurate and punctual analysis of trade flows from 1948 to 1999.[138] According to his estimates, the GATT/WTO system has not had any dramatic effect on trade: it shows some positive results, but nothing special if compared to classic gravity variables or to the influence wielded by regional trade agreements. Gowa and Kim, instead, present recent empirical results whereby the GATT/WTO system could be interpreted as an exercise in classical great powers diplomacy, given that the only states that have seen their commerce strongly increased are the major trade partners of the two powers that essentially created the system at the end of World War II, namely the United States and the United Kingdom.[139] The latest study on the effect of GATT/WTO on trade, on the contrary, is again in tune with the first investigations on such issue, since it finds a positive and remarkable effect of the multilateral system on international trade.[140] The authors do not include in their model usual political variables such as alliances and democracy in order to replicate Rose's strategy. They claim that to understand properly the action of the GATT/WTO system is necessary to go beyond formal membership to the agreement and acknowledge the many rights and obligations that the system created also for a

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[138] See Rose, 2004.

[139] See Gowa and Kim, 2005. Gowa and Kim justify their results stressing the fact that under the GATT protocol, tariff bargaining adhered to the principal-supplier rule. Thus, trade barriers were reduced on the basis of concessions on particular goods exchanged between their principal suppliers—that is, the nations that were the main source of these goods to each other's markets. As such, it privileged trade expansion among the major trading nations.

[140] See Goldstein, Rivers and Tomz, 2007.

wide range of non-members participants that have been overlooked by Rose.

Even the most ancient and dramatic form of interaction among states, war, has been the object of contrasting hypotheses regarding its effects on bilateral trade. If most of the studies that include the presence of war between the dyad components though focusing on other variables find negative coefficients of such a variable,[141] Morrow, Siverson and Tabares find that war has no significant effect on international commerce.[142] Among the studies that have faced directly the issue of the effects of war on international trade, instead, Barbieri and Levy find that in most cases war does not have a significant impact on trading relationships. Although war sometimes leads to a temporary decline in the level of dyadic trade, in most instances war has no permanent long-term effect on trading relationships and, in fact, trade often increases in the postwar period.[143] More recent studies, however, seem to provide quite robust results according to which war disrupts trade, even though some specifications can be made. For instance, Anderton and Carter make a distinction between major power wars and wars where at least one party is not a major power, thus discovering that the disrupting effect is more severe in the first case, but also in the second situation the hypothesis of trade disruption is basically confirmed.[144] In the same line, Keshk, Pollins and Reuveny achieve robust results showing that war exerts remarkably negative consequences on bilateral trade, while the reverse fails to be confirmed, so that bilateral trade cannot be considered a

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141 See among others Mansfield, 1994.

142 See Morrow, Siverson and Tabares, 1998.

143 See Barbieri and Levy, 1999.

144 See Anderton and Carter, 2001.

valid antidote against war.[145] Li and Sacko have studied the issue more deeply and carried out their empirical work on the basis of an interesting and refined theory incorporating rational expectations and uncertainty into the profit calculus of trading firms.[146] They divide the consequences of war on trade in *ex ante* and *ex post* effects. *Ex ante* effects are due to the fact that forward-looking trading firms are able to perceive rising risks and internalize them by seeking additional insurance in negotiating future trade contracts. The extra costs make some trade no longer profitable, so that trade can begin to be reduced and diverted even before the onset of war. However, since traders lack perfect foresight and maximize their profit over more than one period, constantly updating their expectations and behaviors, *ex post* negative consequences of conflicts are always possible. Such negative consequences, namely the extent of trade disruption, are influenced by the degree of unexpectedness of the conflict, by its severity and by its duration. Other things being equal, the more unexpected, the more severe and the longer an armed conflict is, the greater it reduces bilateral trade *ex post*. Nonetheless, *ex post* effects are always influenced also by the expectations of firms *ex ante*, so that a severe conflict could have only minor *ex post* effects if it was rightly expected as severe before its onset.

With these hypotheses in mind, Li and Sacko carry out their econometric analyses of bilateral trade among 120 countries from 1949 to 1992. The results confirm their theory, since the existence of an armed conflict between the members of the dyad appear to disrupt (*ex post*) trade. In addition, they find that not

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[145] See Keshk, Pollins and Reuveny, 2004. According to their results, war decreases bilateral trade of about 40 %.

[146] See Li and Sacko, 2002.

only war onset, but also its duration and its severity have significant negative effects on bilateral trade, along the lines of their reasoning. As regards other well-known political variables, Li and Sacko find that alliances, joint democracy and PTAs have all positive influences on trade, in tune with other studies previously presented.

If all the studies presented so far use total trade as their dependent variable, Gowa and Mansfield have tried to make a first valuable effort to explicitly acknowledge the views of the new trade theory, which explains massive trade flows among countries characterized by similar factor endowments with product diversification coupled with increasing returns to scale.[147] It is a way to expand our knowledge of the complex world of economic interdependence, investigating new phenomena which are changing the usual mechanisms of the international economic system. When the conditions of the new trade theory hold and production exhibits scale economies, a firm's *ex ante* and *ex post* incentives to produce for export may diverge. *Ex ante*, a firm can realize larger profits if it produces for export than if it produces exclusively for domestic consumption. If doing so locks the firm into a bilateral monopoly, however, the firm becomes vulnerable to *ex post* attempts to renegotiate the division of the surplus. Thus, absent some mechanism to resolve the time-inconsistency problem, the level of international trade will be suboptimal. Put it differently, the risk of opportunistic policies by host governments is particularly high for foreign exporters who operate in these conditions. While irreversible investments are commonly made to support international trade,[148] they can be particularly burdensome in case of scale-

[147] See Gowa and Mansfield, 2004.
[148] See Freund and McLaren, 1999.

economies production and institutional devices which can reduce the consequent risks are expected to show remarkably positive effects on trade.

Alliances and PTAs can both serve this purpose and as a matter of fact Gowa and Mansfield study the influence of alliances on this phenomenon through an analysis of bilateral trade flows among the great powers between 1907 and 1991. Focusing on the major powers of the system makes sense in this case not only because they are particularly involved in security issues, but also because intra-industry trade occurs among countries with relatively similar factor endowments and relatively high levels of per capita income. As such, the countries that any mechanism distinguishes as "secure foreign markets" must be relatively wealthy, and their capital-labor ratios must be relatively similar. The results obtained thanks to a version of the well-established gravity model show that if alliances appear to promote trade in general, they are particularly effective for increasing returns-to-scale-trade, which occupies a progressively larger percentage of total trade, especially among the most advanced economies. As regards the influence of other institutional devices, the econometric analysis confirms previous studies pointing out that both EC and GATT exert a positive influence on bilateral trade and thus ascribing this study among those which find room for different logics and therefore different paradigms in the complex environment represented by the international system.

Another step towards the full acknowledgement of complexity is represented by Long and Leeds's study, which have recently analyzed the impact on trade exerted by the alliances that included provisions on economic cooperation and were in force among European states before WWII.[149] Their research proves that such treaties increased trade between allies much more than simple alliance treaties did, but in a way it just confirms what was largely expected, namely that states stipulate particular kinds of treaties because they have interests in doing so. Unfortunately, this last specification is not compared with the previous ones based on the distinction between defense and non-defense pacts, so that we are not able to verify which distinction is the most significant and if there is any sort of correlation between the variables. Nonetheless, this latter study reinforces the idea that international security and economic interdependence are connected fields, that the relationship between them is a complex one and that states often tend to reach different goals at the same time and that they are used to doing it through different, sometimes mixed and ambivalent means.

1.4.2 The Other Side of the Coin: Politics as the Dependent Variable

If all previous studies have employed international trade as their dependent variable, using it to operationalize economic interdependence, there is another branch of empirical literature equally developed which has approached the knot of the relationship between international politics and international economics from the opposite side, namely investigating the influence of economic variables on political outcomes. The achievements reached by the researchers who follow this stream are important to evaluate in a proper way the concrete relevance

[149] See Long and Leeds, 2006.

of the theories exposed in the first part of this chapter and grasp the complexity of the relationship under scrutiny.

The fundamental political outcome at the centre of these studies is the outbreak of war, and the hypotheses put to the test descend from the classical liberal theory of international politics, according to which a higher degree of economic interdependence would foster peace and inhibit conflict. Liberal trade encourages specialization in the production of goods and services, rendering private traders and consumers dependent on foreign markets. These actors have an incentive to avoid wars with key trading partners, since any disruption in commercial relations stemming from hostilities would be costly. Liberals stress that trade benefits all participants, since open international markets foster the efficient utilization of domestic resources. However, Albert O. Hirschman has pointed out that the gains from trade often do not accrue to states proportionately and that the distribution of these gains can affect interstate power relations.[150] In the same vein, the extent to which trade partners depend on their commercial relationship often varies substantially among the constituent states. If one partner depends on a trading relationship much more heavily than another partner, the costs associated with attenuating or severing the relationship are far lower for the latter than the former state. Under these circumstances, trade may do little to inhibit the less dependent state from initiating hostilities.

Polachek inaugurated this strand of empirical literature and carried out a study which remained as a benchmark for all subsequent research on this topic.[151] His study on conflict and

150 See Hirschman, 1980.
151 See Polachek, 1980.

trade starts directly from the hypothesis that holding other factors constant, dyadic conflict would be negatively related to dyadic trade patterns. Thus, country pairs with the most mutual international trade should exhibit the least conflict. In addition, it is argued that the more essential and strategic the trade (i.e., the stronger the dependence), the greater the deterrent effect of trade on conflict. Similarly to what Pollins would have made some years later, Polachek uses event data to construct an index of relative cooperation/conflict in dyads composed of thirty nations over a period of ten years (1958-1967). Each diplomatic interaction among the states under scrutiny is included in one of the 15 available categories and then translated into a numerical value.[152]

Differently from Pollins, Polachek assumes that classical economic theory holds and defines the utility function that states seek to maximize in purely economic terms. From this perspective, states that specialize more will be bound to trade more and therefore they will have more to lose in case of conflict, given the increased costs of trading and the eventual complete disruption of trading channels. The empirical results stemming from multiple regression analysis strongly confirm Polachek's hypotheses, linking a high level of trading with a low level of conflict and establishing an inverse causal relation from trade to conflict according to which in elasticity terms doubling trade within two countries would reduce conflicting relations by 30%.

Oneal, Oneal, Maoz and Russett make an effort to conjugate the logic according to which democracy would reduce conflict with the one that assumes the pacifying effect of interdependence, thus aiming at testing the relative strength of

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[152] See Azar, 1980.

the commercial and the democratic strands of liberal theory. Analyzing the period 1950-1985, they include in their model a contiguous and a dichotomous measure of democracy,[153] a measure of economic interdependence defined as total bilateral trade relative to GDP and various other control variables such as contiguity between the two states and the presence of alliances. The results of logistic regressions show that alliances, democracy and economic interdependence among states all exert a remarkable effect reducing the probability of war within politically relevant dyads. Contiguous dyads are particularly likely to experience conflicts and in these cases interdependence appears to be the most effective variable in diminishing the probability of war. For what concerns the action of democracy, instead, the results match the expectations, but when interdependence is included in the model a difference arise between the results of the continuous and the dichotomous measures. While the coefficients of the variable indicating the joint presence of democracy are still significant and positive, the continuous variable often does not reach usual significance levels. These findings reinforce the idea that democracies seem to behave differently and respect liberal predictions only when they face similar regimes.[154]

The relevant and robust positive effect of economic interdependence in reducing the probability of war is confirmed also by Oneal and Ray, who test different ways to measure the level of democracy and find that also the political distance between the internal regimes of the components of the dyad is a

[153] The continuous measure points to the level of democracy present in each single member of the dyad, while the dichotomous measure is referred to the presence of a democratic regime in both members of the dyad.

[154] This is what has been called the "separate peace". See Panebianco, 1997.

relevant factor that influences the likelihood of war. A shorter distance favors peace, while a larger distance tends to push towards conflict.[155] Similar results are achieved also in the detailed study by Oneal and Russett, who go even further investigating the effect of economic interdependence. They add economic openness expressed as total trade (instead of dyadic) to the usual measure of trade dependence within the dyad and find that also openness, in addition to mutual dependence, is a predictor of peaceful relations.[156]

Oneal and Russett have been very active in searching for solid empirical confirmation of the theory of liberal peace.[157] Expanding the temporal domain of their studies to the period 1885-1992, they find that all three components of such theory (democracy, economic interdependence and membership in international organizations) are still valid and operate in favor of peace.[158] Even controlling for different polar configurations of the international system, the liberal variables seem to have positive consequences for the maintenance of peace and if international organizations membership exerts only a small effect, economic interdependence seems to be the most powerful tool.

Gartzke contributes to the debate on the liberal peace introducing states' preferences among the variables that could have a relevant impact on the outbreak of war.[159] He constructs an index to measure affinity in foreign policy preferences thanks

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[155] See Oneal and Ray, 1997.
[156] See Oneal and Russett, 1997.
[157] For other studies on this topic carried out by these authors but which are not directly addressed here, see Oneal and Russet, 1999b; Oneal, 2003; Oneal, Russet and Berbaum, 2003.
[158] See Oneal and Russett, 1999a.
[159] See Gartzke, 1998.

to the vote given by states in the General Assembly of the United Nations, assuming that sharing the same regime could be not enough to avoid war and that having the same foreign policy goals and orientations, instead could play a significant role. The results of the logistic analysis confirm that affinity in foreign policy is an important factor to preserve peace and when such variable is included in the model it also alters the results of democracy. Nevertheless, economic interdependence remains the most stable leg of the theory, exerting the stronger effects irrespective of the model specification.

Mansfield and Pevehouse make a step forward in the investigation of the relationship between interdependence and peace including PTAs in the usual liberal model on dyadic military disputes.[160] In an institutionalist perspective, they assume that parties to the same PTA are less prone to disputes than other states and that hostilities between PTA members are less likely to occur as trade flows rise between them. Preferential arrangements reduce trade barriers among members and limit the capacity of participants to subsequently raise these barriers. Hence, a state entering a PTA helps to insure against the possibility of future surges in protectionism on the part of other members.[161] From that state's standpoint, the benefits of obtaining such insurance grow if the other members include its key trade partners, since increases in protection by these partners are likely to yield considerable harm. The benefits of PTA membership also grow if states fear that they will be left without adequate access to crucial international markets unless they

[160] See Mansfield and Pevehouse, 2000.
[161] See Mansfield, 1998.

belong to a preferential grouping, a concern that has contributed heavily to the recent rush of states entering PTAs.[162]

Findings accord with these arguments and imply that the relationship between commerce and conflict is more complex than it is usually thought. For states that do not belong to the same PTA, the flow of trade has only a weak impact on hostilities. For PTA members, however, rising commerce strongly reduces the likelihood of military conflict. Furthermore, parties to the same PTA are less prone to engage in military disputes than other states.

Other really interesting results on this issue have been achieved by Gartzke, Li and Boehmer, who make a valuable effort to widen the operational definition of economic interdependence taking into consideration not only trade, but also monetary policies and investment flows.[163] They also interpret interdependence as a process of signaling, following the works of Fearon and others:[164] political shocks that threaten to damage or destroy economic linkages generate information, reducing uncertainty when leaders bargain. Threats from interdependent states carry more weight than threats from autarchic states precisely because markets inform observers as to the veracity of political talking. The findings of this study confirm the wisdom of the tendency to see the topic under scrutiny as a very complex one. The pacific effect of trade almost disappears when other indicators of economic interdependence are included in the model, but not all those variables exert a

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[162] See Yarbrough and Yarbrough, 1992.
[163] See Gartzke, Li and Boehmer, 2001.
[164] See Fearon, 1994; 1995.

pacific effect: asymmetrical monetary relations, such as those related to pegging policies, show in fact positive coefficients.

Gartzke and Li develop this line of thought when they assume that globalization increases markets' autonomy and their ability to respond to political shocks irrespective of states' policies.[165] The very essence of their theory is that in a situation of integrated and efficient markets, every frightening political choice implies and immediate and easily quantifiable cost represented by capital flight. The leader of a globalized state thus faces a trade-off between economic and political incentives. Leaders that value economic conditions more than a given political issue will prefer to accept less generous bargains, while leaders that value the issues at stake highly and pursue more advantageous political bargains can demonstrate preference intensity through a willingness to incur economic hardship. The results of the various variables included in the model to measure the degree of states' integration in the global markets show that more integrated states are less likely to fight, meaning that the increasingly complex interplay between states and economic agents caused by globalization can also have some positive political externalities.

This brief review of the empirical literature dealing with the influence of economic variables on the most important issue of international politics, namely the problem of peace and war, highlights the tangible relevance of the liberal theory of international politics. Nonetheless, these studies have been challenged both on the base of their content and on the base of the methods they apply. On the first point, Barbieri tests the hypotheses of the liberal peace on the period 1870-1938 and finds

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[165] See Gartzke and Li, 2003a.

very different results from the ones I have presented so far.[166] Starting from a neutral theoretical position, the author puts to test the fundamental hypotheses regarding the relationship between interdependence and commerce that stem from opposite traditions of thought, including in the model both liberal and realist variables. Barbieri distinguishes militarized disputes from wars and according to the results of the econometric analysis economic linkages have a dramatic effect on whether or not dyads engage in militarized disputes, but no influence on the occurrence of wars. Rather than inhibiting conflict, extensive interdependence seems to increase the likelihood that dyads engage in militarized interstate disputes. Peace through trade is most likely to arise within dyads composed of mutually dependent trading countries, but extreme interdependence, whether symmetrical or not, has the greatest potential for increasing the likelihood of conflict.

For what concerns methodology, Beck, Katz and Tucker stress the importance of modeling temporal dependence dynamics in time-series—cross-sectional analyses with a binary dependent variable (BTSCS), since temporal dynamics in these kinds of panels are even more important and complicated than they are in the cases with a continuous dependent variable.[167] In these studies it is very likely that the structure of the data violates the assumption of independence that is at the base of ordinary logit and probit methods. If it happens in the dataset under scrutiny and such temporal dependence is not corrected, the results can be unreliable in unpredictable ways: at minimum they can be marked by overconfident standard errors, but the problems could also affect the values of the coefficients. Beck,

[166] See Barbieri, 1996.

[167] See Beck, Katz and Tucker, 1998.

Katz and Tucker recalculate Oneal and Russett's (1997) results and discover that using ordinary logit in that case causes dramatic consequences: when they apply their method and account for duration dependence, the coefficient indicating the influence of trade on the outbreak of military disputes is strongly reduced and it becomes statistically insignificant, while the effect of democracy remains fundamentally unchanged. In order to avoid the risk of reaching completely wrong conclusions in presence of temporal dependence and neutralize such problem, Beck, Katz and Tucker propose to add a series of dummy variables (or natural spline functions) to the logit specification, thus marking the number of years since the start of the sample period or the previous occurrence of war.

However, these challenges notwithstanding, the strand of literature has gone ahead and increased our knowledge on the topic in remarkable ways. For what concerns Barbieri's findings, Gartzke and Li have demonstrated with mathematical methods that such results were mainly caused by the variable Barbieri has chosen to measure dyadic trade.[168] Such variable is represented by the proportion of bilateral trade to each state's total trade (trade share), which seeks to quantify the political importance of a given trading relationship, relative to trade with a state's other partners. In conceptual terms, Oneal and Russett's variable to measure commercial interdependence represents instead the joint importance of a particular bilateral trade relationship to both total trade and the national economy. These two variables are constructed in markedly different ways and the mathematical functions that describe them are related in ways that are perfectly compatible with the contradicting results of

[168] See Gartzke and Li, 2003b.

those studies. As regards the issues raised by Beck, Katz and Tucker, instead, the most recent studies explicitly acknowledge their contribution and in presence of temporal dependence researchers add the necessary splines to their models estimated through logit.[169] Nonetheless, even after these appropriate methodological corrections, economic interdependence has been found to exert a remarkable pacific effect on interactions among states through different channels.

To sum up, literature studying the influence of economic variables on political outcomes and literature using economic interdependence as its dependent variable are two sides of the same coin represented by the relationship between international politics and international economics. Both strands of empirical research have progressively converged towards the idea that (in Erik Gartzke's words) "interdependence really is complex", that both realist and liberal traditions can be useful to interpret some parts of such a multifaceted phenomenon and that the two fields are strictly connected in ways that are not immutable but rather influenced by the general transformation of the international system. As an example of this trend, recently Pevehouse elaborates and tests several different concepts of "conflict" with the aim of finding a better dependent variable for this type of empirical research.[170] In his analyses the author finds that both realist and liberal hypotheses are partly supported by the data, since trade seems to increase the likelihood of small amount of conflict, but reducing at the same time the probability of continuous prolonged fighting. In addition, above-average trade levels seem to reduce the probability of war. Gartzke, instead,

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[169] See among others Oneal and Russett, 1999; Gartzke and Li, 2003b; Gartzke 2007; Gelpi and Grieco, 2008.
[170] See Pevehouse, 2004.

claims that researchers should begin to study more intensively the phenomenon of capitalism disaggregating it and operationalizing it through various variables, such as GDP per capita, trade openness and capital openness, in addition to the usual ones focused on trade interdependence.[171] Including these and other variables connected to capitalism in the models would allow us to fully appreciate the effects of internal and international economic forces on the outbreak of war as well as to discover that capitalism, rather than democracy, is the real base of the liberal peace. Finally, Gelpi and Grieco carry out a very detailed study to investigate whether democracy and autocracies react in the same way to trade integration when the eventual outbreak of conflict is at stake.[172] They find robust evidence that while integration in the world markets and therefore a high degree of economic interdependence has a remarkable pacific effect for democracies, it does not make much difference for autocracies, that do not have to respond to a public opinion strongly influenced by the economic situation. In this way they find that not only both parts of the liberal peace theory play a role, but also that they intersect and modify each other's action.

Having completed this review of the empirical literature on the relationship between international politics and international economics, it should be clear that the topic is quite complex, subject to many methodological problems and characterized by a continuous evolution. In the next two chapters I will try to contribute to such evolution in two ways. First of all, I will study the influence of realist and liberal political variables on international trade updating previous

[171] See Gartzke, 2007.
[172] See Gelpi and Grieco, 2008.

research and taking into consideration the post-Cold War years, which until today have been hardly included in empirical studies. I assume that the radical change undergone by the international system both from a political and from an economic point of view has some consequences on these dynamics. Secondly, I will try to expand the operational definition of economic interdependence changing international trade with FDIs as dependent variable. Although increasingly important, international investments flows have been overlooked in this branch of studies, but I think that they could provide interesting results, since they share some features with trade, but they behave differently for other reasons, for instance because investors consider different time horizons from trading firms. As far as I know, this is the first study using bilateral FDIs in a gravity equation to study the influence of political variables on economic interdependence.

2. INTERDEPENDENCE THROUGH TRADE TODAY

2.1 Introduction

Since the XIX century, classical political economy has developed models of international trade to explain both the advantages which derive from openness to international commercial flows and the structure of such flows among different countries. Up to now, the hypotheses included in the Ricardian model and in the Heckscher-Ohlin-Samuelson model still constitute the base of many analyses aimed at explaining the onset and the maintenance of commercial relationships among states. Next to these two classical frameworks, in the last twenty years a new trade theory has been worked out, to deal with the changing structure of international production, the phenomenon of intra-industry and intra-firm trade as well as with the increasing role of multinational corporations.[173] This branch of economic theory assumes that rising incomes generate a demand for product diversity and that production processes exhibit increasing returns to scale – that is, the average cost of production drops as output expands. These assumptions, coupled with the decreasing costs of transportation and the international structure of labor costs, help explaining a growing percentage of international trade, especially represented by flows of similar but not identical goods among developed countries and flows of non-finished goods within the same

[173] On role of multinational corporations from an economic point of view, see Dunning, 1993; Markusen, 2002. On the role of American multinationals from a political science perspective see the classical work by Gilpin, 1975.

companies.[174] These different theories explain international trade focusing on economic variables, but they also represent the base of the studies in political science and international relations presented in the first chapter, which focus instead on the relationship between international politics and international economics.

It can be noticed that no one of the studies included in the review of the empirical literature that uses economic interdependence as its dependent variable takes into consideration post-Cold War years and therefore neither the influence exerted by the post-bipolar system on the knot of economic interdependence. As far as I know, the only exception to the silence of scientific empirical literature on this topic is represented by Baroncelli, who studies the commercial flows among the great powers between 1980 and 1998.[175] In this article the author investigates the influence of some political variables such as democracy and alliances (defined in broad terms) on trade interdependence among the great powers and takes account of the first years following the end of the Cold War. Such study highlights some interesting results, sometimes conflicting with previous similar literature. As far as democracy is concerned, the results show that it exerts a remarkable effect on international trade among the great powers, which tends to increase with the end of the Cold War. However, also sharing an autocratic regime seems to favor trade within the dyad, even though to a lesser extent. Surprisingly, the presence of an alliance between the members of the dyads appears to reduce trade, and this result is statistically significant both before and

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[174] See Krugman, 1980; Helpman, 1984; Krugman and Helpman, 1985.
[175] See Baroncelli, 2003.

after the end of the Cold War. Another finding which is at odds with preceding literature is represented by the effect of previous colonial ties between the states, which seem to exert a negative effect, while according to usual hypotheses it should influence bilateral trade positively.

Unlike Baroncelli, in this chapter I will not take into consideration the Cold War years, since I believe that the relationships between political and economic dynamics in that period have already been sufficiently studied both at the general level and for what concerns the great powers, thanks to studies which have brought the discipline to reach some valuable tenets. Rather, I intend to concentrate my research on the post-Cold War period and on the post-bipolar system, expanding the time span studied by Baroncelli to more recent years and analyzing two different datasets, one including only the great powers and the other one open to all available dyads of the system. If preceding research projects have found that systemic polarity has relevant consequences on the way political variables influence economic interdependence, it should be particularly appealing to assess the outcomes of the most recent systemic change on the issue at stake. Political variables essentially exert their effects on economic interdependence because they help actors to reduce the risks that derive from uncertainty in an anarchic environment. Realist theories put states at the center of the stage focusing on their attitudes towards economic interdependence with other states, while the liberal economic tradition considers firms to be the most important actors in the international economic system. Nonetheless, both types of actors are concerned about uncertainty and security issues, which have different weights in different systems. The steady and clear bipolar system of the Cold War has been replaced by a new kind of international system marked by globalization of different spheres of human life[176] and especially by a high degree of market integration, but such system is usually still called "post-bipolar system", since specialists are still in doubt about the features of its structure: I hope that the results of this study, compared with the ones obtained by the researchers that have dealt with the classical multipolar and bipolar systems, can help to shed some indirect light on the ways the present world works and on the main characteristics of this system.

Moreover, globalization has not reduced the importance of issues connected to international trade, but rather increased their salience for contemporary interactions among states, so that carrying out an empirical research on this period should also have a direct relevance for the discipline of international relations. As a matter of fact, while the volume of world merchandise exports between 1990 and 1998 (the post-Cold War years included in Baroncelli's study) grew of 6.5% and the volume of exports in the same period grew of 5.7%, both the volume and the value of world exports over the period 2000-2006 marked a 5.5% growth.[177] Given that the average indexes for the second period are calculated over a six-year time span while the indexes for the first period include eight years, and taking into account that the second period comprises two years of global commercial stall caused by the external and unpredictable shock represented by the September 11th terrorist attacks, we can maintain with a high degree of confidence that the phenomena of growing market integration and global trade are still dominant features of the present international system, possibly even more than they used to be some years ago.

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[176] See Held, McGrew, Goldblatt and Perraton, 1999.

[177] See WTO Annual Report, 1999; 2007. Available at: http://www.wto.org/english/res_e/statis_e/statis_e.htm.

In the second section of this chapter I will introduce the logics according to which some political variables included in my empirical analysis could exert a significant impact on economic interdependence among states and I will formulate some hypotheses on the direction of such eventual impact. In the third section I will describe the research design, the model and the variables used. In the forth section I will explain the methodological problems I had to face in the realization of this study and the methods used to face such problems, while in the fifth section I will present the results stemming from the econometric analysis of the database including all available dyads in the system. Finally, in the sixth section I will briefly introduce the analysis of the database including only the great powers and then I will comment the results arising from it.

2.2 Some Political Variables and International Trade

All the political variables I decided to comprise in this study have already been included in previous similar studies that have used the gravity equation of international trade to analyze the influence of international politics on economic interdependence. I decided to select only "experienced" variables for my model in order to facilitate the comparability of the results obtained in this chapter with the ones achieved in the existing literature on the multipolar and bipolar systems. For what concerns the criterion I applied to choose them, I acknowledge both realist and liberal variables for a number of reasons: first of all because I want to favor the comparability with existing literature; secondly because the fundamental aim of this chapter is testing the relevance of both traditions of thought for a new international system; finally because I assume that both states and private actors play an important role in present international economic system, which is increasingly complex and characterized by the interplay of different logics.

In an international system that appears to be more open and pluralistic than the previous ones, where financial markets judge the reliability of states' policies on a day by day basis and multinational corporations are able to move impressive amounts of richness from a country to another, thus causing remarkable shifts in the labor markets of the countries they operate in, it seems plausible to presume that private actors and the logics they apply in their activities have an important role for contemporary economic interdependence.[178] Nonetheless, states remain the most important actors on the scene, the ones that are able to decide on peace and war, as well as on the rules that have to be followed in the system, even if they are not the only players anymore and if the system is much "thicker" than that described by classical realism. In such a context, analyzing the influence of political variables on international trade implies looking at two distinct dimensions: one characterized by the presence and the behavior of firms, the other marked by the actions of states. Although states and firms can disagree and even clash on particular issues and policies, both types of actors maximize utility functions that include economic welfare (or profit) and security, so that for what concerns the issues addressed by my analysis they are more likely to share the same views than contrast each other.

International trade generates security externalities and since the anarchic nature of the international system places

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[178] On the relationship between states and markets see, among others, Strange, 1994; 1996; 1998; Gilpin, 2000; 2001; Held and McGrew (eds.), 2002; 2007.

pressure on states to attend to the power of others, they cannot ignore these security externalities without bearing substantial risks.[179] Trade among allies is likely to enhance the security of all the parties, given that the gains from trade accrue to states with common security goals and bolster the aggregate political-military power of the alliance.[180] States are therefore expected to discriminate in their foreign economic policies between allies and adversaries. Firms are expected to behave consistently for various reasons. First of all, if states impose tariffs and different types of trade barriers on the way towards adversaries' markets, trading with such markets will entail additional costs and it will become less profitable, or otherwise such costs will have to be added to the final consumer price, with the outcome that the demand for the traded goods in the adversaries' markets will decrease. Secondly, an alliance can provide private firms a useful signal indicating a secure place to trade with for two main reasons. Above all, allied states are less likely to fight each other, so that trading states that engage in important contracts don't have to fear the risks of war, or at least such dangers are reduced to the minimum level. In addition, alliances can help regulate opportunism by foreign governments. Investments in relation-specific assets, such as those made in facilities designed to transport goods to a specific market or those made in dedicated assets to produce goods for a particular market, are common in international trade and imply very high costs in case they have to be converted to alternative uses. For this reason, they are highly exposed to opportunistic behavior by foreign governments. However, because open trade among allies

[179] See Morgenthau, 1985; Waltz, 1979; Grieco, 1988; Mearsheimer, 2001. On security externalities caused by international trade, see Gowa, 1994.
[180] See Gowa and Mansfield 1993, Mansfield and Bronson, 1997a.

promotes the security of members, governments have less incentive to behave opportunistically toward their allies' firms than toward firms of other states.[181] As a result, firms that want to operate abroad limiting risks are expected to trade with allied markets. If some types of alliances are more reassuring than others, they will probably represent more effective signals, thus stimulating trade more than other forms of alliance. Alliances can indeed prescribe different behaviors to their members. Those alliances that imply the obligation to intervene militarily in defense of an attacked partner (defense pacts) communicate a strong commitment by the signatories and for this reason they are particularly reassuring for trading firms.[182] For what concerns states, instead, if they decide to bind themselves with such a strong tie, they probably share important strategic interests with their allies and therefore they will be well disposed to let them grow richer and stronger. Less stringent types of alliances (such as non-aggression pacts or neutrality pacts), on the contrary, will not be equally encouraging, so that we expect a weaker effect than the ones exerted by defense pacts and by alliances in general.

Previous studies on these issues have highlighted that democracy can influence bilateral international trade from several different reasons.[183] Since this is really an explorative study, whose first goal is extending the use of the gravity equation for international trade to the post-bipolar system and derive some first indications on the way international politics influence international trade in the age of globalization, I will not

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[181] See Mansfield and Bronson, 1997a; Gowa and Mansfield, 2004.

[182] See Long, 2003.

[183] See North, 1990; Olson, 1993; Bliss and Russett, 1998; Morrow, Siverson and Tabares, 1998; Mansfield, Milner and Rosendorff, 2000.

include in my analysis specific variables or specific econometric techniques to attempt an evaluation of the explanatory power incorporated in the different hypotheses. Rather, at this stage I want to verify if democracy influences international trade in the post-Cold War era and if such variable behaves differently from what it used to do in the bipolar world. Nonetheless, it is possible to detect the role of signal that the presence of a democratic regime, like the presence of an alliance, represents both for firms and for states, thus calling both dimensions into question also in this case. For what concerns the micro-level, entrepreneurs willing to trade perceive democratic countries as more secure and reliable markets than autocracies for reasons that at the moment we will not put to test. However, the most plausible explanation seems to be that democracies, being characterized by more transparent institutions and procedures, as well as by the presence of independent judiciaries, checks and balance-systems and multiple veto players, usually are more predictable and more stable in their policy-making, in addition to be more qualified to protect property rights.[184] Another conceivable reason why democracies should trade more with each other than they do with non democratic countries is more security-related in nature and is represented by the fact that usually a democracy do not wage war against another democracy.[185] This feature is important for firms based in democratic countries, but also for the same democratic states, because they receive the message that if their partners are democratic, they will be able to lower their trade barriers in order to increase their own welfare without undergoing

[184]See North, 1990; Olson, 1993.
[185] See Bliss and Russett, 1998.

excessive risks. From this point of view, democracy ceases to be a unit attribute to acquire a relational perspective.

As far as war is concerned, I assume that the outbreak of a violent conflict between two states will bring a dramatic disruption of bilateral trade flows involving such countries. Although I acknowledge the hypotheses according to which skilled entrepreneurs are able to foresee future tensions and dangerous situations involving the states they operate in, which is congruent with the logics of signaling I apply as a general framework, I also assume that not all wars and political-military crises are predictable, as well as not always firms are in the condition to withdraw all of a sudden from ongoing commercial relations and contracts.[186] It is true that there are important cases in history wherein states continued to trade with their adversaries until the very outbreak of war,[187] but I consider such cases as exceptions caused by peculiar situations. Reasons conducing to that kind of behavior can involve multiple factors: first of all, decision-makers of states can have a personal proclivity for absolute gains instead of relative gains; secondly, and more likely, they may believe that cutting down trade flows until the situation is irreparably compromised could provoke aggression by the adversary; thirdly, in situations marked by high political tension states may decide to keep on trading with their adversaries sacrificing some of their autonomy to extract all advantages and gains in terms of efficiency that derive from an open economic policy, in order to better equipped to face an eventual war.[188] However, such a behavior is encouraged by the structure of multipolar international systems, where alignments

186 See Li and Sacko, 2002.
187 See Liberman, 1996; Barbieri and Levy, 1999; Andreatta, 2001.
188 See Liberman, 1999; Andreatta, 2001.

are more flexible and less durable, so that it is usually more difficult to discern friends from adversaries and have a clear idea in advanced of the side states will take in a future war. However, contrary to previous studies, I do not include in my analysis militarized interstate disputes (MIDs) according to the definition provided by the *Correlates of War Project* (COW). To obtain data relative to international military conflicts in the very last years I use the *PRIO Armed Conflicts Dataset*, which includes only cases involving the actual use of armed force and at least 25 battle-related deaths in a year, excluding cases where only the threat of the use of force is at stake, but not its concrete use, which are instead comprised in the COW dataset. For this reason, I expect a significant negative effect of real war on bilateral trade.

Past colonial ties have often been included in analyses of international trade flows and they result to exert significant positive effects on bilateral trade both in studies carried out by political scientists and in studies performed by economists.[189] I expect that such positive influence is still present also in the international trade flows of the post-bipolar system, even though probably with a slightly smaller effect than the one showed during the Cold War. It is widely acknowledged that in periods of high political tension and harsh competition for power, major powers tend to build their own spheres of influence introducing degrees of hierarchy in the anarchic international system and fostering good economic relations with the minor powers subject to their influence, thus playing the role of the hegemon on a sub-systemic scale.[190] Similarly to what happens in presence of

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[189] See Mansfield and Bronson, 1997a; Mansfield, Milner and Rosendorff, 2000; Rose, 2004; 2005.

[190] On hegemony and different kinds of hegemony, see Cox, 1983; Snidal, 1985b; Ikenberry and Kupchan, 1990.

alliances and democratic regimes, the existence of spheres of influence supported by tangible economic and political policies[191] and indicated by previous colonial ties encourage firms to follow the incentives provided by states. Nonetheless, even when the system changes and spheres of influence are not well structured anymore, trade still continues to follow the same paths, at least to a certain degree, because it often brings about sunk costs for firms, which find it profitable, to remain in the market they penetrated under different general conditions.[192] Besides, in the case of past colonial ties, international trade flows are influenced by history also because foreign firms find culturally similar contexts, where communication with customers and institutions is easier, procedures are straightforward and meeting the tastes of the public is more natural than it is in other places.

Finally, I included in my econometric analysis some institutional variables aimed at investigating the effectiveness of agreements and international organizations which have the objective of liberalizing trade among their members. I expect that both the WTO and various types of preferential trading arrangements stimulate bilateral trade in the post-bipolar system, as it is usually found by studies on the Cold War period, but my goal here is trying a first evaluation of the relative efficacy of the different institutional solutions, especially of the WTO and the EU.[193] As it is well known, the GATT and then the

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[191] Alesina and Dollar, 2000 find a significant relationship between past colonial ties and foreign aid flows, as well as between foreign aid and international trade.

[192] See Eichengreen and Irwin, 1996.

[193] Previous IR studies that comprise GATT/WTO, EC/EU or PTAs among their independent variables include Mansfield and Bronson, 1997a; Mansfield, Milner and Rosendorff, 2000; Gowa and Mansfield 2004.

WTO have been created with the explicit aim of negotiating progressively lower tariffs and barriers to trade among their members, so that the logics that should guide the action of the multilateral system and allow an increase in bilateral trade among its members is quite evident. The multilateral system was indeed founded on the basic principle of nondiscrimination, which the founders made operational by requiring each participant to treat others as a most-favored nation. According to Article I, "any advantage, favor, privilege or immunity granted by any contracting party to any product originating in or destined for any other country shall be accorded immediately and unconditionally to the like product originating in or destined for the territories of all other contracting parties." To this day, the right to MFN treatment is arguably the principal benefit of participation in the GATT/WTO. Nevertheless, the GATT/WTO permitted the existence of other, more generous trade agreements. This seeming inconsistency reflected the underlying reality of trade relations at the end of World War II.

Similarly straightforward is the reason why PTAs should exert a positive effect on bilateral trade, given that such arrangements refer to agreements stipulating that states impose lower levels of protection on members' goods than on the goods of third parties. These agreements may take the form of free-trade areas, customs unions, common markets and economic unions. While differences exist among these commercial arrangements, common to all of them is the reciprocal nature of the preferential treatment which the participants accord to one another.[194] Yarbrough and Yarbrough argue that PTAs provide

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[194] The competing action of PTAs and the presumed scarce effect of WTO membership on states' trade policies due to the practical possibility to extend most-favored-nation status unilaterally to countries outside the system have

an institutional means of governing opportunism. Like alliances, PTAs are likely to promote relation-specific investments by private agents, which in turn spur commerce among participants.[195]

2.3 Research Design

This study is designed to investigate if and how various types of political variables influence economic interdependence among states expressed in terms of trade flows in the post-bipolar system. Until today, only one empirical study has tried to address this issue, assessing the relationship between international politics and international trade among the major powers in the period 1980-1998. I will extend the time period to the latest years and I will perform my econometric analysis on two different datasets: one includes all dyads for which data on bilateral trade are available, while the other comprises only the major powers of the system. All political variables have a relational nature and can be situated at the sub-systemic relationships' level of analysis, which is particularly suitable to understand the context in which interactions among states take place, as well as to examine the relationships between international security issues and international political economy matters. Taking into account that this is essentially an explorative study, the political variables considered in the models derive both from the liberal and the realist traditions of thought, so that the relevance of both schools can be evaluated in the light of the present international system. In addition, all

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been considered the causes of the scarce meager influence of WTO on international trade recently recorded by some studies. See Rose, 2004.

[195] See Yarbrough and Yarbrough, 1992.

political variables are well established in previous literature, in order to facilitate a comparison with the effects exerted by the same variables during the pre-World War II multipolar system and the Cold War bipolar one, investigated by preceding studies. In addition to attempting a first evaluation of the dynamics that characterize contemporary economic interdependence, I hope that this chapter will contribute to shed some indirect light on the structural features of the international system, by means of a comparison with prior results.

In order to undertake my empirical analysis, I followed the literature on this topic and I decided to use the gravity model for international trade. For this reason, in both my datasets the unit of analysis is represented by the directed dyad-year and the dependent variable is the amount of bilateral trade between the two components of the dyad in a given year.[196] The larger dataset comprises all dyads for which data on trade are available in the period between 1990 and 2005, thus reaching a total amount of about 200,000 observations. I decided to maintain the largest dimensions allowed by the United Nations *COMTRADE Database* in order to limit problems of biasedness and to give the most general picture available of the phenomenon under consideration, given that this is the first study on this time span and it is meant to be an explorative effort. However, I deleted entries that were not referred to states, but rather to aggregates such as regions and international organizations' members or to dependent territories. Both the larger and the smaller datasets include economic and political variables, assembled together

[196] Using directed the dyad-year implies that every couple of states appears two times in the database for each year. The first time state *i* will be the exporter and state *j* the importer, while in the second case the roles will be inverted.

using various different sources which will be described in the next sub-section.

2.3.1 The Model and the Variables

The model I elaborated is basically a version of the Gravity Equation for international trade. This equation has embodied the real "workhorse" for empirical studies on international trade carried out both by economists and political scientists in the last thirty years. In the words of Andrew Rose, the gravity model,

"unusually for economics, is also a successful model, in two senses. First, the estimated effects of distance and output (the traditional gravity effects) are sensible, economically and statistically significant, and reasonably consistent across studies. Second, the gravity model explains most of the variation in international trade. That is, the model seems reliable and fits the data well."[197]

The gravity equation is called this way because it is inspired by the formulation of the "Law of Universal Gravitation" proposed by Newton in 1687. Such physical law held that the attractive force between two objects *i* and *j* is given by:

$$F_{ij} = G\,(M_i M_j)/D_{ij}^2 \qquad (1)$$

[197] See Rose, 2004.

Where notation is defined as follows:

• F_{ij} is the attractive force.

• M_i and M_j are the masses.

• D_{ij} is the distance between the two objects.

• G is a gravitational constant depending on the units of measurement for mass and force.

In 1962 Jan Tinbergen proposed that roughly the same functional form could be applied to international trade flows.[198] However, it has since been applied to a whole range of what we might call "social interactions" including migration, tourism, and in the last years also to foreign direct investments. This general gravity law for social interaction may be expressed in roughly the same notation:

$$F_{ij} = G\,(M_i^{\alpha}\,M_j^{\beta})/D_{ij}^{\theta} \qquad (2)$$

Where notation is defined as follows:

- F_{ij} is the "flow" from origin *i* to destination *j*. Alternatively, let F_{ij}^* represent total volume of interactions between *i* and *j* (i.e. the sum of the flows in both directions: $F_{ij}^* = F_{ij} + F_{ji}$).
- M_i and M_j are the relevant economic sizes of the two locations.

[198] See Tinbergen, 1962.

– If F is measured as a monetary flow (e.g. export values), then M is usually the gross domestic product (GDP) or gross national income (GNI, formerly GNP) of each location.

– For flows of people, it is more natural to measure M with the populations.

- D_{ij} is the distance between the locations (usually measured center to center).

[Note that we return to Newton's Law (equation 1) if $\alpha = \beta = 1$ and $\theta = 2$].

The multiplicative nature of the gravity equation means that we can take natural logs and obtain a linear relationship between log trade flows and the logged economy sizes and distances:

$$\ln(F_{ij}) = \alpha \ln(M_i) + \beta \ln(M_j) - \theta \ln(D_{ij}) + \varepsilon_{ij} \,. \qquad (3)$$

The inclusion of the error term ε_{ij} delivers an equation that can be estimated by ordinary least squares regression.

While there is no close correspondence between the leading theoretical models of trade and the variables appearing in the gravity equations, a number of economists have suggested that the gravity-model framework is compatible both with the Heckscher-Ohlin-Samuelson model and with theories of trade in the presence of imperfect competition.[199] The form of the equation presented above is the basic one, that researchers have progressively expanded adding the variables they want to study in each single piece of research. In addition to the GDP of both countries and the distance between them, two variables are almost constantly present in the analyses that have been carried out in the last years: GDP per capita and the populations of both countries. While economists usually choose to include GDP per capita and leave aside the amounts of population, political scientists have prevailingly chosen to behave in the opposite way, even though in the last years they seem to move slowly towards the other formulation. In this first empirical chapter I decided to use in my model the amounts of population of the countries under scrutiny, in order to favor the comparison of the results with previous similar studies, given that those on the bipolar system are not so recent and that Baroncelli used this variable in her analysis.

DEPENDENT VARIABLE:

The dependent variable is represented by the total amount of goods exported by country *i* into country *j* in year *t*. As I have already mentioned, this variable comes from the COMTRADE database of the United Nations, which is the largest depository of international trade data, covering 274 territorial entities from 1962 until two years ago. When exports from country *i* to country *j* are missing, I use the partner's import reports to plug holes in the data set. In principle, we should have that that $EXPORTS_{ij}$ = $IMPORTS_{ji}$, since the value that country *i* records in its export ledger should equal the number that

[199] See Anderson, 1979; Bergstrand, 1985; Deardorff, 1985; 1998.

country *j* records in its import books. In practice, however, country reports differ for a variety of reasons including different bases of valuation and timing. Nonetheless differences are usually minor and they don't seem to cause problems to the reliability of results. Values were originally expressed in current US dollars, but I deflated them to work with real values and eliminate the part of temporal dependence incorporated in trade values that was due to inflation. All variables expressed in US dollars were originally expressed in current terms, so that I deflated them using the Producer Price Index (PPI) elaborated by the Bureau of Labor Statistics, US Department of Labor.[200]

<u>INDEPENDENT VARIABLES</u>:

ECONOMIC SIZE OF THE IMPORTER ($ECOSIZE_j$) – The first economic independent variable to take into consideration is the economic size of the importing country. This variable represents the economic mass of the importer. It is one of the variables which are indispensable in gravity models and usually it exerts a significant and positive effect on bilateral trade. I expect a similar result also in the commercial dynamics of the post-bipolar system. As usual, it is measured by the GDP of the importer. Data are from the *World Development Indicators 2006* of the World Bank and are expressed in real US dollars.

ECONOMIC SIZE OF THE EXPORTER ($ECOSIZE_i$) – The second economic variable I control for is represented by the size of the economic system of the exporter. As the previous one, this variable is always present in the gravity models of international trade and it usually exerts a significant and positive influence on

[200] Mansfield, Milner and Rosendorff, 2000 used the same method.

dyadic trade flows. I expect it to do the same also in the context of this study, given that larger economies should be able to export more. Also this variable is measured by the GDP of the country it is referred to and it is expressed in real US dollars. Data are from the *World Development Indicators 2006* of the World Bank.

POPULATION OF THE IMPORTER (POPUL$_j$) – As I have already mentioned, this variable is typical of the IR studies dealing with international trade, according to which it should exert a significant and negative effect on bilateral commercial flows.[201] Data are from the *World Development Indicators 2006* of the World Bank, but I integrated them in cases of missing values with data provided by the US Census Bureau.

POPULATION OF THE EXPORTER (POPUL$_i$) – This variable is the mirrored image of the previous one and along with past literature it should exert a negative influence on bilateral trade. The rationale behind this prediction is that a state with a large population has a large internal market that demands for enormous quantities of goods, thus stimulating firms to produce for their own national markets and reducing exports.[202] For what concerns my expectations about these two last variables, I am not sure whether the old results will be confirmed by this study. In the last fifteen years economic flows (this is true for international trade but even more for investment flows) have grown dramatically, much more than any other measure in the world; the structure of international production has accelerated its transformation; the strategies of growth implemented by many states have changed towards a greater confidence in trade; and

201 See Gowa and Mansfield, 1993; 2004.

202 See Mansfield and Bronson, 1997a.

some new important actors have entered the scene. For these reasons I suspect that these two variables could show some differences from their past behavior. As for the population of the importer, data are from the *World Development Indicators 2006* of the World Bank, with some integrative data provided by the US Census Bureau.

DISTANCE BETWEEN THE EXPORTER AND THE IMPORTER (DIST) – This is the last variable whose presence is compulsory to qualify an empirical model of international trade as a gravity equation. In all preceding studies the results for this variable are strongly significant and constantly negative. I expect that distance continues to have a negative impact on bilateral trade, since moving goods between two distant points continues to be more complex and expensive than moving the same goods between two near points, irrespective of the type of transportation. The data on distances between countries are from the database provided by the Centre d'Etudes Prospectives et d'Informations Internationales (CEPII) and are expressed in kilometers.[203]

COMMON OFFICIAL LANGUAGE (COMMLANG) – This is a variable that accounts for the influence of cultural factors on trade flows. I included it in my analysis since the degree of cultural similarity can affect economic activities in various ways and it is particularly important in long-distance relationships involving relation-specific investments and sunk costs. This variable is not often included in the IR literature on gravity analyses of international trade, but it is often included in the

[203] The database is available at http://www.cepii.fr/francgraph/bdd/distances.htm. The distances are calculated following the great circle formula, which uses latitudes and longitudes of the most important cities/agglomerations (in terms of population).

economic literature. For this reason I decided to use it, but only in additional models, not in the basic one. I expect it to exert a positive influence on bilateral trade and it is constructed as a dummy variable that scores 1 if the countries included in the dyad share the same official language and 0 otherwise. Data are from the CEPII database.

JOINT DEMOCRACY (JOINTDEM) – This is a central variable both for the literature on these topics and for the present study. It derives from the liberal tradition of thought on international relations and the results of many studies have found evidence of its relevance. In order to measure the level of democracy, I referred to the variable POLITY2 comprised in the Polity IV database, an eleven-point scale from -10 to 10 that I have transformed in a scale from 1 to 21 so as to have only positive values.[204] JOINTDEM is constructed as a dummy variable that equals 1 when both the members of the dyad score at least 17 in the measure of unilateral democracy and 0 otherwise. As I have already mentioned, this variable that has already been used in a number of studies on the classical multipolar and bipolar systems is not able to explain the exact reasons why democracy should promote bilateral trade, but since this is an exploratory study I decided to assess first of all if democracy still has the same effect also in the post-bipolar system. To evaluate the exact dynamics that allow democracy to

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[204] Polity IV measures the levels of democracy and autocracy present in nearly all countries of the world taking into consideration four institutional dimensions for the democracy index and five for the measure of autocracy. POLITY2 is the composite measure of democratic institutions obtained by the difference between the DEMOC and the AUTOC indexes for each country and treats the cases of "standardized authority codes" along the lines suggested by the Polity IV Manual. See Marshall and Jaggers, 2005, pp. 15-16.

foster international trade this variable should be disaggregated in several different indicators and other more complex research strategies should be applied, that could constitute interesting developments of the present research. I assume that the presence of democratic regimes continues to have a positive influence on international trade also in the post-bipolar system,[205] even though I am not in the position to advance hypotheses concerning the extent of such influence in comparison with the previous periods, considering the increasing complexity of current international political economy.

FOREIGN POLICY AFFINITY (AFFIN) – This variable has been constructed by Erik Gartzke as an index ranging from -1 to 1 with the aim of measuring the interest similarities among dyads of states. This measure stems from an analysis of the votes of all member states in the UN General Assembly and therefore it registers the behavior of states when they deal with a wide variety of different situations. A value of -1 means absolute dissimilarity of interests, while a value of 1 stands for a complete affinity between the two states considered.[206] I converted the data to have only positive values. As far as its effect is concerned, findings of the literature are mixed and I am not in the position to formulate any specific hypothesis at the moment.

ALLIANCE BETWEEN THE EXPORTER AND THE IMPORTER (ALLNCE) – This is the typical security-oriented variable that addresses the relationships' level of the international system and that serves the purpose of trying to measure the weight of security logics on international

[205] This is also one of the main findings of Baroncelli, 2003 for the post-Cold War years considered in that study.
[206] See Gartzke, Li and Boehmer, 2001. These data can be downloaded at: www.columbia.edu/~eg589/.

interdependence.[207] ALLNCE is constructed as a dummy variable coded 1 if an alliance exists between the members of the dyad and 0 otherwise. Data on alliances are from the ATOP 3 database and since the last year considered by this database is 2003, I expanded the data on my own to comprise 2005.[208] The results of the literature on this variable are a little controversial, but usually it seems to exert a positive influence on bilateral trade flows. Baroncelli finds that alliances exert a negative influence on trade flows among their members in the period 1980-1998 and this raises some interesting questions,[209] but I assume nonetheless that the signal function of alliances continues to be valid even in the post-bipolar system, even though perhaps to a different extent. I therefore expect a positive coefficient from this variable.

DEFENSE PACT BETWEEN THE EXPORTER AND THE IMPORTER (DEFPACT) – This variable constitutes an important specification of the variable that detects alliances. DEFPACT is a dummy variable that scores 1 when the countries included in the dyad are members of the same alliance and such agreement obligates them to provide military support to the ally in case of attack by a third party. This type of alliance is the most demanding but also the most important one, since it highlights the tightest relations a state has with other members of the system. In some studies on international trade these alliances

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[207] The first empirical analysis of this kind is Gowa and Mansfield, 1993.

[208] The ATOP 3 database defines alliances as "written agreements, signed by official representatives of at least two independent states, that include promises to aid a partner in the event of military conflict, to remain neutral in the event of conflict, to refrain from military conflict with one another, or to consult/cooperate in the event of international crises that create a potential for military conflict". See Leeds, Ritter, Mitchell, and Long, 2002, p. 238.

[209] See Baroncelli, 2003.

have been recognized as the ones that really have a significant impact on economic interdependence.[210] Since I assume that alliances keep playing their role indicating (more) secure environments to private actors and encouraging states to foster good economic relations with their allies in their own interest, I also have to assume that defense pacts have a positive influence on trade, likely stronger that the one exerted by general alliances. Even for this variable data are from the ATOP 3 database.

NON-DEFENSE PACT (NONDEF) – This is a dummy variable that equals 1 when the states comprised in the dyad under scrutiny are members of the same alliance but this agreement is not a defense pact. Long finds that this type of alliance has no significant impact on international trade, since it would not be sufficiently reassuring for firms. I agree with this view and therefore I expect a weak effect of non-defense pacts on bilateral trade, being it statistically significant or not. I constructed this dummy variable starting from the ATOP 3 database and defining it as the opposite of DEFPACT.

COLONIAL TIES (COLONY) – This dummy variable scores 1 if the countries included in the dyad shared a colonial relationship after 1945. Maintaining patronage relationships with former colonies to create spheres of influence is a typical strategy in power competition and these ties can have a positive effect on bilateral commercial flows. The relevance of colonial ties has been evaluated in various studies on international trade and foreign aid, which have always found that this variable tends to increase the amount of goods exchanged within the dyads at stake, sometimes with striking results.[211] Baroncelli, instead,

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[210] See Long, 2003.

[211] See among others Mansfield and Bronson, 1997a; Alesina and Dollar, 2000.

achieves results at odds with pre-existing literature, discovering that the legacy of colonial relationships does not influence international trade or that it exerts a diminishing effect.[212] These latest results notwithstanding, previous studies and methodological debates around analyses of international trade clearly show that data on commercial flows are used to suffering from temporal dependence.[213] Past colonial ties provide a plausible explanation for such dynamics and for this reason I expect a significant and positive effect of COLONY on bilateral trade, even though it will be probably smaller than it used to be during the Cold War. Data for this variable are from the CEPII database.

ARMED CONFLICT BETWEEN THE EXPORTER AND THE IMPORTER (WAR) – This dummy variable is coded 1 when an armed conflict is fought by the two components of the dyad and they fight on opposite sides. As I have already mentioned, I do not refer to militarized interstate disputes (MIDs) and to the COW dataset as the great majority of previous studies do because I need more up-to-date data. For this reason I use the PRIO *Armed Conflict Dataset, Version 3-2005*. This database, differently from COW, records only actual cases of use of military force, excluding situations where the use of force is only threatened.[214] The PRIO dataset divides armed conflicts in three different categories: *minor conflict*, *intermediate conflict* and *war*.

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212 See Baroncelli, 2003.

213 See Eichengreen and Irwin, 1996; Gowa and Mansfield, 2004.

214 The PRIO Dataset is based on the following definition elaborated by The Armed Conflict Data project at the Department of Peace and Conflict Research at the University of Uppsala: "An *armed conflict* is a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths".

Minor conflicts are marked by At least 25 battle-related deaths per year for every year in the period; intermediate conflicts are characterized by more than 25 battle-related deaths per year and a total conflict history of more than 1000 battle-related deaths, but fewer than 1,000 per year; wars are instead marked by at least 1000 battle-related deaths per year.[215] For the purpose of this study, I aggregated the three categories and I constructed a dummy variable that equals 1 when conflicts reach at least the lowest level in the PRIO dataset. Even though it would be improper to call "war" each case when this variable equals 1, it is nonetheless a more selective variable than COW's MID is. As a result, I expect a negative impact of the presence of war/armed conflict on bilateral trade flows.

JOINT GATT/WTO MEMBERSHIP (WTO) – This dummy variable equals 1 when both countries that compose the dyad are members of the GATT/WTO.[216] The WTO website lists all the members of the organization with the respective dates of accession to the GATT and the WTO. I constructed this variable on my own starting from those data. First, I constructed a variable indicating the membership of each country in a given year and then I combined the data to obtain the joint-membership variable. Even though the effectiveness of the GATT/WTO in promoting trade has been recently questioned by noteworthy studies, other investigations have found that it exerts a positive effect.[217] I expect that this study will provide support to this latter position.

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[215] See Strand, Carlsen, Gleditsch, Hegre, Ormhaug and Wilhalmsen, 2005.

[216] See http://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm; http://www.wto.org/english/thewto_e/ gattmem_e.htm.

[217] See Rose, 2004; Gowa and Mansfield, 2004; Goldstein, Rivers and Tomz, 2007.

JOINT MEMBERSHIP IN PREFERENTIAL TRADE ARRANGEMENTS (PTA) – This dummy variable equals 1 when both members of the dyad are parties to the same preferential trade agreement. The WTO website provides information on the members and entry into force of all the PTAs that have been notified by WTO members (which are bound to do it) as well as of a short description the obligations they imply.[218] Similarly to what I have done to construct the WTO-membership variable, I started from the data recorded in the WTO database to construct this variable.[219] I acknowledge the rationale described in previous studies that included this variable in their models and I expect to replicate the results of those studies finding a positive influence of PTAs on bilateral trade, even if I cannot advance any hypothesis on its relative strength in comparison to WTO.

JOINT MEMBERSHIP IN EC/EU (EU) – This dummy variable simply equals 1 when both states that compose the dyad are members of the EC/EU.[220] I constructed this variable to compare the effectiveness of the WTO with that of the most famous preferential trade arrangement. I assume that this variable exerts a significant and positive impact on bilateral trade, probably stronger than the one exerted by WTO, given that the EC/EU has become in the last fifteen years much more than a regional trade arrangement.

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218 See http://www.wto.org/english/tratop_e/region_e/region_e.htm

219 Rose, 2004 constructed his various variables using the same source.

220 EC/EU membership has already been included in other gravity models. See among others Mansfield and Bronson, 1997a.

Taking into account the variables described above, the version of the gravity equation that will constitute my base model can be expressed:

$$\ln(EXP_{ij(t)}) = \alpha + \beta_1\ln(\mathrm{ECOSIZE}_{j(t-1)}) + \beta_2\ln(\mathrm{ECOSIZE}_{i(t-1)}) + \beta_3\ln(\mathrm{POPUL}_{j(t-1)}) + \beta_4\ln(\mathrm{POPUL}_{i(t-1)}) + \beta_5\ln(\mathrm{DIST}_{ij}) + \beta_6\mathrm{JOINTDEM}_{ij(t-1)} + \beta_7\mathrm{ALLNCE}_{ij(t-1)} + \beta_8\ln(\mathrm{AFFIN}_{ij(t-1)}) + \beta_9\mathrm{WAR}_{ij(t-1)} + \beta_{10}\mathrm{COLONY}_{ij(t-1)} + \beta_{11}\mathrm{WTO}_{ij(t-1)} + \varepsilon_{ij}.$$

To sum up, the basic model I have expressed above in form of equation is designed to test the relevance of different political variables stemming from different theoretical traditions and attempt an explorative empirical assessment of the relationship between international politics and international trade flows in the post-bipolar system. According to my hypotheses, the results should highlight a positive influence of the variables indicating that the states which compose the dyad share the same language and are both democracies, while I do not have structured hypotheses on the effect of AFFIN, since it could show a positive coefficient but the results in literature are mixed. For what concerns the various types of alliances, I expect to see a positive effect of the simple type and a stronger effect of defense pacts, while I assume that non-defense pacts will exert only a minor or insignificant effect. Colonial ties should be still able to exert a positive influence on bilateral trade since history has its own weight in commercial flows, but probably its effect will be weaker than during the Cold War. On the contrary, I expect a negative impact of the variable indicating an ongoing armed conflict between the components of the dyad. As far as the institutional variables are concerned, finally, I expect that all three variables exert a positive impact, even if the EC/EU should be more effective than other forms of arrangement, considering its far-reaching development in many different fields.

2.4 Methodology

Following the footsteps left by this strand of empirical studies in the discipline of international relations means tracing the history and the development, sometimes controversial but always lively, of the quantitative methods of analysis for the investigation of international politics. The two parallel bodies of works accounted for in the review of the empirical literature have approached international economics to international politics and vice versa, thus importing in the sub-field of political science remarkable methodological innovations and integrating insights from both spheres of knowledge. Susan Strange used to say that economy is and has always been political.[221] Strongly believing in the fundamental accuracy of this phrase, although in different ways, the scholars who have carried out these research projects have tried to put such short and sharp sentence to test, in order to make it stronger and clarify its implications as well as its consequences. Someone could criticize this literature on the base of the assumption that quantitative methods of analysis only seem scientific because they are often framed in mathematical (or rather statistical) jargon, while in the end they are not more scientific than traditional qualitative methods. It is right to acknowledge that this position is completely true, as well as it is true that quantitative methods cannot explain everything, not only in fields where they are clearly inapplicable, but neither in those fields where they have been widely applied.

[221] See Strange, 1997.

Nonetheless, the choice of methods largely depends of the object we have to study, and only in subordinate way on the questions we want to ask. If our dependent variable is represented by economic data, quantitative methods are particularly useful, although they cannot answer to every question. However, even among quantitative methods we have to carefully choose the appropriate one: again, above all considering with awareness the type of data we have to analyze, then the questions we would like to pose.

Quantitative methods for the study of economic interdependence have progressively moved towards a greater sophistication and complexity. The first studies on the influence of political variables on economic interdependence begin to apply econometric analysis through simple multivariate linear regressions with cross-sectional datasets.[222] In other words, these studies try to estimate the effects of political variables on international trade through "pictures" of this phenomenon that are taken at given points in time. For every chosen year, these studies perform a regression that estimates through the ordinary least squares method (OLS) the relation undergoing between the dependent variable represented by commercial bilateral flows and various independent variables such as GDP, distance and alliances. However, since political phenomena, as well as the international system as a whole, change over time, researchers who decide to work on cross-sectional data have to run multiple regressions on data taken in various years in order to give an idea of the consequences of the flow of time. Nonetheless, cross-sectional analyses do not take into any consideration the effects of temporal dynamics, so that the effects caused by different

[222] See Gowa and Mansfield, 1993.

historical contexts can be inferred only from external information, without any direct confirmation about the impact of time from the regression results.

In order to acknowledge this problem, the next step brought IR scholars to organize data in pooled cross sections and estimate the influence of political variables via OLS method.[223] Pooled-cross-sectional databases acknowledge the effect of time since they comprise data collected at different points in time, but in this type of data structure the units of analysis change in correspondence with every year included in the database, since they are extracted randomly from a large population. As it is predictable, pooled cross-sectional regressions can be useful to give a general idea of the matter, but they are not appropriate if we are also interested in the identity of the units. To reconcile these exigencies, that constitute the requirements of standard research projects on economic interdependence, researchers shifted to panel data analysis, which consists in analyzing data matrixes made of a time series for each cross-sectional member in the database.[224] Panel data methods allow researchers to follow the same population sample over time, so that we can have information on what happens to the relationships between the dependent and the independent variables as time passes for the sample of units they have selected on the basis of the research project.[225]

Nevertheless, investigating these flows through panel data analysis, or through time-series-cross-section data analysis

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[223] See Mansfield and Bronson, 1997a; Morrow, Siverson and Tabares, 1998.
[224] See Wooldridge, 2006.
[225] On panel data analysis see Wooldridge, 2002; Hsiao, 2003.

(TSCS),[226] as it is called in the realm of political science, involves several remarkable methodological problems, partly due directly to the method, which is complex and implies several important assumptions, partly to the internal structure that usually these datasets assume and finally partly to the necessity as well as the will to combine such a method with these types of data. Ordinary least squares is optimal for TSCS models if the errors are assumed to be generated in an uncomplicated ("spherical") manner. In particular, for OLS to be optimal it is necessary to assume that all the error processes have the same variance (homoskedasticity) and that all of the error processes are independent of each other. The latter assumption can be broken down into the assumption that errors for a particular unit at one time are unrelated to errors for that unit at all other times (no serial correlation) and that errors for one unit are unrelated to the errors for every other unit (no spatial/contemporaneous correlation). Unfortunately, common tests for these data characteristics usually make researchers reject the assumptions above cited, thus pushing toward procedures able to solve or at least to deal with such problems. For what concerns heteroskedasticity, econometric literature has elaborated several different ways to deal with such problem, in the form of different ways to compute heteroskedasticity-robust standard errors.

The most common correction for heteroskedasticity is represented by Huber-White standard errors. In presence of large samples, this type of standard error allows researchers to keep on estimating the effects of the independent variables

[226] Beck and Katz defined “time-series-cross-sectional datasets” those datasets that include a large number of units (N) and a relatively small number of years (T). See Beck and Katz, 1995. Nonetheless in literature the concepts are used almost in an interchangeable way.

through OLS coefficients, but testing hypotheses using valid standard errors and *t* statistics. Basically, the problem in calculating valid standard errors in presence of heteroskedasticity is that such feature of data has consequences on computing the variances of independent variables, Var(β_j). If the error terms contain heteroskedasticity, then Var(u_i | x_i) = σ_i^2, where *i* indicates that the variance of the error depends upon the particular value of x_i. When this happens, the usual formula to estimate the variances of the independent variables is no longer valid and the same applies to the OLS standard errors, which depend on such variances. White showed that substituting the OLS residuals from the initial regression of *y* on x_i in the equation to estimate the variances of x_i, we obtain a valid estimator of these variances. This happens because when the latter equation is multiplied by the sample size *n*, it converges in probability to $E[(x_i - \mu_x)^2 u_i^2] / (\sigma_x^2)^2$, which is the probability limit of *n* times the equation to estimate the independent variables' variances.[227] The squared root of Var(β_j) estimated with the new method is the heteroskedasticity-robust standard error, which is asymptotically valid in presence of any kind of heteroskedasticity, including homoskedasticity.

An alternative method to correct for heteroskedasticity in panel data analysis has been elaborated by Beck and Katz, and it has become increasingly popular in political science and international relations literature, because it is particularly appropriate for time-series-cross-sectional datasets with small number of units (*N*) and relatively long time periods (from 20 to 70 or 80 years). In this kind of data sets, provided that eventual serial correlation is acknowledged and removed, using OLS with

[227] For a simple explication of Huber-White standard errors, see Wooldridge, 2006. For a more formal and extensive explanation see Wooldridge, 2002.

panel-corrected standard errors (PCSE) results in more reliable standard errors than FGLS methods provide.[228] In this method, the variance-covariance matrix Ω is an NT × NT block diagonal matrix with Σ, an N × N matrix of contemporaneous correlations along the diagonal. OLS residuals, denoted $e_{i,t}$ for unit i at time t, are used to estimate the elements of Σ:

$$\Sigma_{i,j} = (\textstyle\sum^{T}_{t=1} e_{i,t}\, e_{j,t}) / \mathrm{T}$$

Then the standard errors of the coefficients are computed using the square roots of the diagonal elements of:

$$(X'X)^{-1} X'\Omega X(X'X)^{-1}$$

where X denotes the NT × NT matrix of stacked vectors of explanatory variables, $x_{i,t}$. Although this approach estimates the same number of parameters as the FGLS method, it has better small sample properties. The intuition as to why this is the case is that PCSEs are similar to White's heteroskedasticity-consistent standard errors for cross-sectional estimators, but are better because they take advantage of the information provided by the panel structure of the data.[229]

Apart from heteroskedasticity, another recurrent problem in panel data analysis is represented by serial correlation of the error terms across time. As in the case of heteroskedasticity,

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[228] See Beck and Katz, 1995; 1996.

[229] See Beck and Katz, 1996.

consequences of such temporal dynamics of errors can be very serious, causing inefficiency of OLS estimators and biasedness of the independent variables' estimated variances if computed through OLS, thus providing unreliable t and F tests. Very briefly, if we consider the case with a single explanatory variable:

$$y_t = \beta_0 + \beta_1 x_t + u_t \qquad (4)$$

and we assume that the error terms follow the (AR1) scheme:

$$u_t = \rho u_{(t-1)} + e_t \qquad |\rho| < 1$$

where et satisfy the OLS Gauss-Markov assumptions and ϱ is known, it is possible to transform model (4) so that in the transformed model the serial correlation of the error terms is eliminated. The result of the transformations will be:

$$y^*_t = \beta_1^* + \beta_2 x^*_t + e_t \qquad (5)$$

where: $y^*_t = (y_t - \rho y_{(t-1)})$

$$x^*_t = (x_t - \rho x_{(t-1)})$$

$$\beta_1^* = \beta_1(1 - \rho)$$

At this point, given that ϱ is rarely known in practice, it is possible to estimate ϱ regressing the OLS residuals on their lagged counterparts and then use the estimated values of ϱ to insert them in model (5) and estimate the independent variable(s) through OLS. The resulting estimators are the feasible generalized least squares estimators (FGLS) of the βs. In this differencing procedure we lose one observation because the first the first sample observation has no antecedent. To avoid this loss of one observation, that can be precious in small samples, the first observation of y and x is transformed as follows:

$$Y_1^* = y_1(1 - \rho^2)^{1/2}$$

$$X_1^* = x_1(1 - \rho^2)^{1/2}$$

This transformation is known as the Prais-Winsten transformation and it is one of the most common forms of FGLS estimation of the (AR1) model.[230]

Another important issue (and ongoing debate) in the use of panel data analysis for international relations studies and political science in general deals with the opportunity to employ fixed-effects methods, which eliminate the time invariant part of the unobserved effects after having divided it into a time-varying one (idiosyncratic error) and a time invariant one (unobserved heterogeneity).[231] In order to decide between random and fixed-effects methods, researchers can apply the Hausman test for statistical significance in the coefficients of the independent variables previously estimated in both ways.[232] From a theoretical point of view, however, the fixed-effects

[230] See Wooldridge, 2006.
[231] See Hsiao, 2003; Wooldridge, 2006; 2002.
[232] See Hsiao, 2003; Wooldridge, 2002.

method is particularly appropriate if we have to deal with data heterogeneity that can be modeled as parametric shifts, that is if we suspect or have theoretical reasons to assume that unobserved time-invariant factors can affect the value of the dependent variable. Such factors can have different origins, for instance being connected to the identity of the units or due to external shocks that have similar impacts on all units. When the units of analysis are constituted by dyads, fixed effects seem to be of special relevance, because relations between units can be influenced by many aspects that are not directly related to the issue at stake and thus likely to be left out of the independent variables directly acknowledged by the model.[233] This topic is of chiefly importance when the dyads considered are composed of complex entities such as countries, as it is often the case in IR literature, because even in well specified models something can get easily lost.[234]

Nonetheless, the fixed-effects method causes also problems which cannot be overlooked and which are mainly due to the fact that it excludes the possibility of estimating any independent variable that does not vary temporarily. In international relations studies involving countries, some time-invariant variable may be of direct interest and this feature of the fixed-effects methods can be a significant shortcoming, as well as the fact that the use of fixed effects could yield odd estimates of coefficients for variables like democracy, that vary little from year to year and that can be highly collinear with the fixed effects.[235]

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233 See Green, Kim, Yoon, 2001.
234 See King, 2001.
235 See Beck and Katz, 2001.

For what concerns the analysis of the influence of political and economic variables on bilateral trade in the database including all available dyads, I chose to employ the fixed-effects method both for econometric and for theoretical reasons. From a technical point of view, the Hausman test rejects the random-effects alternative and it is significant at the 0.001 level, thus providing a strong motivation to use fixed effects. From a theoretical perspective, instead, commercial relations among states are complex and long-standing relations that can be influenced by many factors at the states', relationships' and systemic levels; some of these factors can be directly included in well specified models, but others will likely remain hexogen to the model, thus creating problems of omitted variables bias.[236] Accordingly, Hsiao suggests that "if inferences are going to be confined to the effects in the model, the effects are more appropriately considered fixed". Political science research often investigates nations and can be certainly included among the cases cited by Hsiao.[237] Nonetheless, Beck and Katz notice that the difference between the random-effects and the fixed-effects estimator gets smaller when T gets larger, so that in typical TSCS there should not be much difference.[238] However, Beck and Katz define TSCS as panels with relatively a small N and a large T, while the dataset I constructed for the general patterns of bilateral trade after the end of the cold war is characterized by a large N and a relatively small T.

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[236] Recently several researchers working on bilateral trade have chosen to use the same method in their studies: see Li and Sacko, 2002: Rose, 2004; 2005; Gowa and Kim, 2005; Goldstein, Rivers and Tomz, 2007. On theoretical reasons to use the fixed effects in the analysis of international trade, see Feenstra, 2004.

[237] See Hsiao, 2003.

[238] See Beck and Katz, 1996.

This is also the reason why I did not calculated panel corrected standard errors *à la* Beck and Katz to deal with heteroskedasticity, and relied instead upon Huber-White robust standard errors.[239] As regards standard errors, I calculated them both in the simple way and clustering by country-dyad, but no relevant difference emerged, as can be seen in the results. Acknowledging the problem of probable misspecification in cases where the weight of history is ignored and the dynamics are not modeled, I introduced a lagged dependent variable in my model,[240] even though some scholars have noted problems in such a procedure and have therefore raised some doubts on this way of modeling dynamics.[241] In my case, however, results do not show any sensitive difference between models with and without lagged dependent variable. In order to estimate the time-invariant variables that would be excluded from the fixed-effects model, I regressed those variables on the fixed-effects previously obtained through the OLS regression.[242] Finally, as a general consideration, given that this study aims also at investigating the eventual differences in the influences exerted by political variables on international trade in the post-bipolar system in comparison to what used to happen before the end of the cold war, the methodology used reflects also the will to find a viable compromise between recent methodological progresses and the methods used in previous studies which could serve as benchmark.

The functional form of all models is semi-logarithmic. The dependent variable, as well as the gravity model variables, is

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[239] See Beck and Katz, 1995; Li and Sacko, 2002.

[240] See Eichengreen and Irwin, 1998; Beck and Katz, 1995; 1996.

[241] See Achen, 2000.

[242] See Ricchiuti, 2004.

log transformed, but not the political variables except for affinity. Log transformation of the gravity model variables is consistent with the functional form of the economic model and allows the estimates to be interpreted as elasticities. Since I had neither theoretical nor econometric reasons to transform most of the political variables, I did not log-transform them. The coefficient of a log-transformed independent variable may be interpreted as the percentage change in the dependent variable given a unit change in the independent variable; yet with the untransformed dummy variable one should transform its coefficient using $(e^{coefficient} - 1)$ and interpret it as the percentage impact on the dependent variable by a change of the dummy variable from zero to one. Finally, I lagged all independent variables by one year in order to avoid or at least reduce problems of simultaneous bias.

Table 1: Effects of Economic and Political Variables on Bilateral Trade

Variables	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**
$ECOSIZE_i$	.271***	.269***	.271***	.271***	.271***
	(.017)	(.017)	(.017)	(.017)	(.017)
$ECOSIZE_j$	.496***	.493***	.495***	.496***	.496***
	(.016)	(.016)	(.016)	(.016)	(.016)
$POPUL_i$	1.788***	1.789***	1.787***	1.784***	1.788***
	(.088)	(.088)	(.088)	(.089)	(.088)
$POPUL_j$	.560***	.562***	.560***	.558***	.560***
	(.060)	(.060)	(.060)	(.060)	(.060)
DIST	-1.528***	-1.501***	-1.522***	-1.525***	-1.497***
	(.009)	(.009)	(.009)	(.009)	(.009)
ALLNCE	.467***		.467***	.465***	.467***
	(.050)		(.049)	(.049)	(.050)
JOINTDEM	.092***	.092***	.092***	.092***	.092***
	(.014)	(.014)	(.014)	(.014)	(.014)
WAR	-.360***	-.357***	-.360***	-.361***	-.360***
	(.129)	(.129)	(.129)	(.129)	(.129)

WTO	.123*** (.015)	.124*** (.015)	.124*** (.015)	.124*** (.015)	.123*** (.015)
COLONY	1.848*** (.069)	1.851*** (.069)	1.852*** (.069)	1.851*** (.068)	1.506*** (.070)
AFFIN	-.088*** (.033)	-.093*** (.033)	-.091*** (.033)	-.088*** (.033)	-.088*** (.033)
DEFPACT		.744*** (.062)			
NONDEF		.413*** (.050)			
EU			.183*** (.015)		
PTA				.025 (.022)	
COMMLANG					.622*** (.022)
Constant	-41.753*** (1.192)	-41.686*** (1.192)	-41.700*** (1.193)	-41.655*** (1.204)	-41.753*** (1.192)
Observations	132986	132986	132986	132986	132986
Period	1990-2005	1990-2005	1990-2005	1990-2005	1990-2005
R^2	.302	.305	.303	.303	.302

Note: Huber-White robust standard errors in parentheses. * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

Table 2: Effects of Economic and Political Variables on Bilateral Trade

Variables	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**
$ECOSIZE_i$	.271*** (.024)	.269*** (.024)	.271*** (.024)	.271*** (.024)	.271*** (.024)
$ECOSIZE_j$	.496*** (.022)	.493*** (.022)	.495*** (.022)	.496*** (.022)	.496*** (.022)
$POPUL_i$	1.788*** (.125)	1.789*** (.125)	1.787*** (.125)	1.784*** (.125)	1.788*** (.125)
$POPUL_j$	.560*** (.091)	.562*** (.091)	.560*** (.091)	.558*** (.091)	.560*** (.091)
DIST	-1.528*** (.009)	-1.501*** (.009)	-1.522*** (.009)	-1.525*** (.009)	-1.497*** (.009)

ALLNCE	.467*** (.058)		.467*** (.058)	.465*** (.058)	.467*** (.058)
JOINTDEM	.092*** (.018)	.092*** (.018)	.092*** (.018)	.092*** (.018)	.092*** (.018)
WAR	-.360** (.148)	-.357** (.148)	-.360** (.148)	-.361** (.148)	-.360** (.148)
WTO	.123*** (.021)	.124*** (.021)	.124*** (.021)	.124*** (.021)	.123*** (.021)
COLONY	1.848*** (.069)	1.851*** (.069)	1.852*** (.069)	1.851*** (.068)	1.506*** (.070)
AFFIN	-.088** (.039)	-.093** (.039)	-.091** (.039)	-.088** (.039)	-.088** (.039)
DEFPACT		.744*** (.081)			
NONDEF		.413*** (.059)			
EU			.183*** (.024)		
PTA				.025 (.029)	
COMMLANG					.622*** (.022)
Constant	-41.753*** (1.764)	-41.686*** (1.764)	-41.700*** (1.764)	-41.655*** (1.784)	-41.753*** (1.764)
Observations	132986	132986	132986	132986	132986
Period	1990-2005	1990-2005	1990-2005	1990-2005	1990-2005
R^2	.302	.305	.303	.303	.302

Note: Robust standard errors clustering by dyads in parentheses. * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

2.5 Results

The results of the econometric analysis basically confirm the trend of the latest studies on the relationship between international trade and politics, as well as the overall hypothesis I formulated at the beginning of the empirical section, namely that the links between the political and economic spheres of the international system are moving towards an increasing complexity where different logics operate at the same time and different types of actors have a relevant role in a game that is played on different levels.

For what concerns the classical gravity variables, both the economic size of the importer and the one of the exporter, expressed by their respective GDPs, show significant coefficients and seem to exert a relevant positive impact on the amount of trade exchanged by the components of the dyads. An interesting feature of the results concerning these two variables is the higher coefficient constantly exhibited by the GDP of the importer country, often nearly twice as much the one shown by the GDP of the exporter. This is quite understandable if we think that in gravity terms a large economic "mass" is important to generate remarkable flows of exports, but if the exported goods have to be bought and consumed in the importing market, then it's clearly more important that this latter environment is able to absorb these imports, that otherwise would have no destination.

For what concerns distance, it has the usual significant and strongly negative effect that we are used to finding in studies based on gravity models of international trade. According to the results of my empirical analysis, distance is still important in the age of globalization and trading with distance places continues to be more difficult and expensive than trading with near countries, even if transportation costs are usually lower than they used to be twenty years ago. However, another logic that could help to explain these results stems from the fact that trading with near countries not only is cheaper in terms of transportation costs, but also easier for gathering the necessary information, especially if trade derives from delocalized production, that implies the need for a remarkable knowledge of the hosting country's normative system.

Population displays results which are at odds with the hypotheses and the usual results of gravity studies carried out in international relations literature. As I mentioned earlier in this chapter, economists usually use a different specification of the gravity model including GDP per capita instead of population and they usually find that such variable exerts a positive impact on bilateral trade.[243] IR specialists, instead, have usually worked with the amounts of population and found that such variables had a negative influence on trade. The explanation for this result maintains that countries with large internal markets tend to export relatively less because national firms produce their products above all for the national markets. Latest studies on the relationship between international trade and international politics using international trade flows as dependent variable, however, failed to confirm this traditional logic. While Gowa and Mansfield found that populations did not exert any statistically significant influence, Baroncelli's results show significant and positive coefficients.[244] The author explains such results with the fact that the dependent variable used in that study comprises both exports and imports instead of only exports, but the fact that my analysis confirms this trend using exports suggests that probably there is something more going on.[245] In this context I can only formulate some hypotheses which

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243 Among recent studies see Rose, 2004; 2005.

244 See Baroncelli, 2003; Gowa and Mansfield, 2004.

245 Gowa and Mansfield do not provide explications for their results, but the employment of some simple mathematical operations can demonstrate that the explication based on the "export + import rationale" is not adequate. Moreover,

are mainly based on the changes undergone by the structure of international trade in the last years. One of the most striking changes is represented by the rise of Asian countries in the rankings of the most trading states. In 1997 China was the tenth largest exporter of the world with a share of 3.3% of world exports, while the United States was ranked first with a share of 12.6%. In 2006, instead, the United States was still at the first place with a share of 9.2% of world exports, but China was at the third place, with a share of 8.6% and an annual growth of exports of 27%, nearly twice the world's and the United States' annual growth, which was 15%.[246] So, if we consider these data, the fact that China is by far the most populous country of the world and that it is undertaking a process of export-led growth, we can have some hints about important dynamics that could also amount to a structural change. However, this is an important subject that here can only be sketched and that deserves future careful research.

Common language matches my hypothesis and seems to exert a significant and positive effect on bilateral trade flows. This variable is a proxy for more comprehensive cultural ties that can be important in order to capture the tastes of foreign customers, to establish good relations with the institutions of the importer countries and to be accustomed with the formal and informal procedures that extensive international trade requires.

As regards the political variables, the presence of a common colonial past has a significant and remarkably positive influence on bilateral commerce also in the post-bipolar system.

I replicated my estimates adding imports to exports and the coefficients of the population variables remained positive.

[246] See WTO, 1998; 2007.

This type of relationship had already been confirmed in various studies on the Cold War years, when the mechanism of sub-systemic spheres of influence and patronage relations was the outcome of a recurrent strategy applied by the major powers.[247] In the post-bipolar system, the spheres of influence seem to have lost much of their relevance, even if such logic has not totally disappeared. The results of this variable seem therefore to be an additional proof of the "weight of history" in international trade, which basically means that international trade flows involve a series of material and immaterial investments that tend to stabilize the interaction under scrutiny, causing trade to be temporally dependent.[248]

Foreign policy affinity is statistically significant and it seems to exert a negative impact on bilateral trade flows. This variable has displayed different results in previous studies, so that it is difficult to formulate explanatory hypotheses for this outcome in the post-bipolar system. Morrow, Siverson and Tabares use a different measure to operationalize the same concept, but they find that it has a significant positive impact on international trade.[249] Long, on the contrary, uses my same measure and does not find any statistically significant influence of foreign policy interests' similarity on international trade.[250] In this context, with no benchmark studies on the post-Cold War period, I assume that this result is somehow linked to the dramatic increase of Asian and especially Chinese trade, since China currently constitutes a major trading pole in the

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[247] For the positive effect of past colonial relationships on bilateral trade, see Mansfield and Bronson, 1997a; Mansfield, Milner and Rosendorff, 2000.

[248] See Eichengreen and Irwin, 1998.

[249] See Morrow, Siverson and Tabares, 1998; 1999.

[250] See Long, 2003.

international system and it stands on positions that are often at odds with the views on global politics supported by the majority of the international community. However, given these contrasting results, it would be probably the case to dedicate additional research to this topic, trying also to operationalize this variable in a different way if we really believe that this issue can be relevant for international trade. My hypothesis on this aspect is that the current operationalization of the concept is too broad, since at the UN General Assembly states vote on many different subjects, some of which are more important and directly related to the reliability of a trading partner, while others seem to be less inherent to the issue at stake. It seems therefore possible to assume that both states and firms use more narrow concepts and indicators to make their decisions.

The presence of an armed conflict between the components of a dyad seems to exert a significant and negative impact on bilateral trade, in accordance with previous empirical literature.[251] This result is constant in all specifications of the model, but it has a value that could seem lower than one would expect, reducing the amount of trade of about 30%. The magnitude of this effect is nonetheless in line with the hypothesis that trading firms are able to detect a part of the risk before the actual outbreak of war and as a consequence they take adequate measures in advance.[252]

Democracy exercises a significant and positive effect on international trade even in the post-bipolar system as it was

[251] See Gowa and Mansfield, 1993; Mansfield and Bronson, 1997a; Mansfield, Milner and Rosendorff, 2000.
[252] See Li and Sacko, 2002.

repeatedly found in studies on the Cold War period.[253] The coefficient of the variable indicating the joint presence of democracy in the components of the dyad is always significant and it acquires approximately the same value in all models, so that the relation is quite steady. As already mentioned, this explorative research is not designed to evaluate which hypothesis advanced by the liberal tradition of thought is more relevant to explain this outcome, but the relationship between democracy and economic interdependence is confirmed and it deserves additional studies focused on the detection of the functioning logics.

For what concerns the influence of alliances, that embody the role of the realist variables, all three different kinds of alliances appear to exert a significant and positive influence on bilateral trade flows. This result confirms the signaling power of alliances and the importance of security issues in the realm of economic interdependence even in the age of globalization, thus substantiating the hints that indicate a trend towards an increasing level of complexity in international affairs, marked by a contemporaneous action of liberal and realist logics. Nonetheless, the fact that also non-defense alliances exercise a significant effect on trade seems to indicate that these issues, though still relevant, have lost part of their salience, so that also less demanding alliances are considered enough reliable signals.

With reference to the role of international institutions in stimulating bilateral trade flows, the empirical analysis shows that these bodies play a role in the dynamics of economic interdependence among states, concurring to increase the

[253] See Morrow, Siverson and Tabares, 1998; Mansfield, Milner and Rosendorff, 2000; 2002; Long, 2003; Milner and Kubota, 2005.

complexity and the pluralism of the contemporary international system. The results of the variables indicating the joint membership in different types of institutions reflect the characteristics of those institutions and the ways these variables have been built. WTO and EC/EU result therefore to be highly effective in promoting trade between dyads of member states: both their coefficients are constantly significant across models and remarkably positive, though statistically different. The variable representing PTAs in general, on the contrary, seems to be non influential, since its coefficients fail to be statistically significant. This could be mainly due to the way I constructed such variable, including all available PTAs reported by the WTO. Agreements granting preferential treatment in commercial relationships have flourished in the last two decades,[254] but only some of them have been really implemented by the signing states. In the cases of non-implementation the problem does not lie in the institutional devices, but in the lack of real political will to initiate a certain process.[255]

2.6 Interdependence among the Great Powers in the Post-Bipolar System

Now I focus on the commercial relationships among the great powers of the system, applying basically the same research design I have applied in the study on the global commercial flows that included all the states of the system. Undertaking a narrow study on the paths of economic interdependence among

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[254] See Mansfield, 1998.

[255] For a different and narrower way of constructing a similar variable, see Rose, 2004.

the great powers in the post-bipolar system is important for several reasons: first of all, the majority of previous empirical studies have analyzed the economic relationships among these countries, so that performing a similar effort in the post-bipolar system increases the comparability of the present study with existing literature.

Table 3: Effects of Economic and Political Variables on Bilateral Trade among the Great Powers

Variables	**Model 1**	**Model 2**	**Model 3**	**Model 4**
$ECOSIZE_i$	.716*** (.017)	.605*** (.023)	.666*** (.018)	.708*** (.018)
$ECOSIZE_j$	.861*** (.019)	.750*** (.025)	.810*** (.019)	.852*** (.019)
$POPUL_i$	.392*** (.025)	.435*** (.026)	.419*** (.025)	.392*** (.025)
$POPUL_j$	.362*** (.021)	.405*** (.021)	.390*** (.020)	.363*** (.021)
DIST	-.788*** (.025)	-.682*** (.027)	-.485*** (.030)	-.801*** (.026)
ALLNCE	.309*** (.045)		.473*** (.045)	.274*** (.046)
JOINTDEM	.013 (.068)	.015 (.069)	.012 (.068)	.013 (.068)
WTO	.304 (.281)	.314 (.278)	.301 (.281)	.305 (.281)
AFFIN	.456*** (.090)	.562*** (.089)	.461*** (.090)	.447*** (.090)
DEFPACT		.656*** (.055)		
NONDEF		.164*** (.047)		
EU			.764*** (.037)	

COMMLANG				.320*** (030)
Constant	-29.443*** (1.165)	-25.882*** (1.312)	-30.432*** (1.148)	-28.873*** (1.173)
Observations	672	672	672	672
Period	1990-2005	1990-2005	1990-2005	1990-2005
R^2	.958	.958	.958	.958

Note: Panel corrected standard errors in parentheses. * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

Second, the major powers of the system are more involved in the competition for power and in the security dynamics than lesser states are, so that the logics connected to the necessity of limiting the risks of trading with adversaries and increasing the benefits of trading with friends should exert a stronger effect among these countries. Finally, since the polar configuration of the system is basically determined by the relative power of these states, analyzing the ways they behave towards each other could result particularly useful in order to achieve a better understanding of the main features of the post-bipolar system.

The countries included in this study are: the United States, Russia, China, the United Kingdom, Germany, Italy, France and Japan. The decision to use these states reflects the will to follow the studies that have been carried out in existing literature. All variables are defined and constructed like in the previous study. I excluded the variable that indicates the existence of previous colonial ties because these countries have not been bound by any colonial relationship after 1945. Similarly, I excluded the variable that indicates the occurrence of armed conflicts between two states, since these countries have not fought each other after World War II. Finally, I excluded from the empirical analysis also the variable that detects the presence of PTAs between the members of the dyads, since it would have been perfectly collinear with the dummy variable that indicates common membership in the European Union. Given the peculiarities of the EU, which is much more than a simple PTA, I decided to include the variable EC/EU, since any relevant influence on the amount of trade is certainly more a consequence of such peculiarities than of the fact that the EU can also be considered a PTA.

For what concerns econometric methods, in the analysis of this smaller dataset I decided to choose a different strategy in order to overcome the problems related to the estimation of time-invariant and rarely changing variables through fixed effects methods when both theory and Hausman test suggest applying such methodology. The method I have used in this study has been recently elaborated and proposed by Plumper and Troeger exactly to face this kind of issues and it is called "panel fixed-effects regression with vector decomposition" (FEVD).[256] It consists in a three-stage technique where the conventional cross-sectional fixed-effects are estimated in the first stage; the next stage involves decomposing these individual effects by partitioning them into separate (strongly or weakly) time-invariant and residual components; and the third stage reestimates the original model via pooled OLS containing both the time-invariant variables and the second-stage residuals noted above.

Variables are considered rarely changing and therefore included in the second stage depending on the between to within

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[256] See Plumper and Troeger, 2007.

variance ratio and on the correlation between the unit effects and the rarely changing variables. A large ratio suggests treating the variable as time-invariant. Strictly time-invariant variables display a between to within variance ratio equal to infinity. It is not possible to provide a fixed rule to choose if a variable should be considered time-variant or rarely changing, but Plumper and Troeger suggest that at a b/w ratio of at least 2.8, the variable is better included into the stage two estimation of FEVD than estimated by a standard fixed-effects model.[257] Following the results of their Monte Carlo analysis Plumper and Troeger claim that in presence of unit effects the fixed-effects model and the vector decomposition model compute more reliable estimates for time-varying variables than pooled OLS or random-effects model do. Between the former two models, the fixed-effects model performs best if the within variance of all regressors of interest is sufficiently large in comparison to their between variance. Otherwise, the efficiency of the FEVD model becomes more important than the unbiasedness of the fixed-effects model.

As regards problems of heteroskedasticity, contrary to the previous study the features of this dataset allow me to compute panel corrected standard errors instead of Huber-White standard errors, thus following both the suggestions of Beck and Katz and the trend of existing literature on economic interdependence among the great powers. As I have already done in the study at the global level, I have lagged all independent variables to avoid problems of inverse causality, while temporal dynamics for the FEVD estimator are accounted for by a Prais-Winsten AR(1) serial correlation correction. The

[257] See Plumper and Troeger, 2007.

variables that were log transformed in the previous study have maintained the same functional form also in this analysis.

The results of the gravity variables basically confirm the outcome of the study on the commercial relationships at the global level: the economic size of both the exporter and the importer exerts a significant and positive influence on the amount of trade, as well as the populations of both countries. The geographical distance between the two extremes of the dyad, instead, has the usual significant and negative impact.

Cultural similarity appears to be an important facilitator of international trade even among the great powers, since the variable that points out if the members of the dyad share a common language shows a significant and positive coefficient also in this analysis, just like it used to do in the previous one.

When the political variables are at stake, however, the peculiar characteristics of the great powers and of their role within the system start to display their importance and the results appear remarkably and interestingly different from the ones achieved from the larger dataset. To begin with foreign policy affinity, this variable seems to have a significant and positive impact on bilateral trade flows among the great powers, consistently with to the studies of Morrow, Siverson and Tabares but at odds with Long and my previous research on all members of the system.[258] The difference in the coefficient of AFFIN with my previous study can be explained by the fact that the great powers are much less willing to trade with eventual or actual adversaries that are lesser states, because of important security concerns that lie on the background of interactions among this type of countries. These states are likely to be much more

[258] See Morrow, Siverson and Tabares, 1998; 1999; Long, 2003.

concerned about the polar configuration of the system and therefore about the distribution of relative gains in the relationships among themselves then they are in the relationships with lesser states. In addition, the small powers that are included in the larger dataset probably do not pay the same attention to these issues, especially in their relationships with the major powers, since they would not be able to make much difference in international security games anyway. In such a situation, it makes sense to assume that this indicator, which is quite comprehensive and the least focused on international security, can show positive coefficients when we analyze relationships among the great powers, but different results in broader contexts.

Joint democracy still exerts a significant and positive influence on bilateral trade flows, thus confirming the relevance of liberal hypotheses also among the great powers, even though the size of its effect is quite small. The weakness of this outcome reinforces the idea that the great powers entertain their reciprocal relationships in a harsher context than the international system as a whole usually is.[259]

In such a framework, the realist variables and the theoretical hypotheses they derive from seem instead to keep their importance, even in the age of globalization. In fact, the presence of an alliance strongly stimulates bilateral trade, just like it used to do in the previous study, and the same holds true for defense pacts, since the variable connected to this kind of alliance shows a significant and remarkably positive

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[259] Baroncelli finds a positive effect of democracy on bilateral trade among the great powers in the post-Cold War years that she takes into account, but in her study the value of the coefficient is much larger. See Baroncelli, 2003.

coefficient.[260] Non-defense pacts, on the contrary, seem to have a slightly different impact on commercial flows among the great powers. While still positive, the coefficient of NONDEF in this latest study indicates that other things being equal the presence of such a pact increases bilateral trade of about 15%. This result is still in tune with the post-Cold War trend sketched in the previous empirical analysis, but in such context the presence of non-defense pacts appeared to increase bilateral trade of about 40%. The latter smaller result therefore communicates the idea that for some reason non-defense pacts are not considered reassuring enough by great powers on their reciprocal relations, probably because of the greater importance of security issues and relative gains.

The fact that realist hypotheses appear to reflect the interactions among the great powers more accurately than liberal ones even in the post-bipolar age seems to be confirmed also by the results of the variables that respond to the logics of institutional liberalism. While joint membership in the GATT/WTO exerts a significant and positive effect on bilateral trade when all the states are taken into consideration, the variable WTO does not produce any statistically significant result in the analysis of the smaller database. Joint membership in the EC/EU instead seems to have a highly positive influence on commercial relations, but I have already mentioned that the EU can hardly be considered a common economic organization. Its members have begun a real process of integration and the several important institutions it is composed by convey much more information and reassurance than any other international

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[260] The result of the variable indicating the presence o fan alliance is at odds with the one achieved by Baroncelli, since in her study alliances seem to diminish the amount of bilateral trade. See Baroncelli, 2003.

organization, constituting a real *sui generis* case in contemporary international system.

2.7 Conclusions

In this chapter I have performed an analysis of the influence of politics on economic interdependence among states expressed in terms of bilateral trade flows, focusing on the years that have followed the end of the Cold War. I have included in my models the classic gravity variables as well as political variables that derive from the realist and the liberal traditions of thought in international relations. The results of the econometric analysis basically confirm the trend that has been put into evidence by the latest studies that have faced the relationship between international politics and the international economy from different perspectives, namely that the contemporary international system is marked by a high degree of complexity. Far from being the realm of a single approach to international politics, the post-bipolar system is characterized by the simultaneous action of different and even contrasting logics.

On the one hand, all three branches of international liberalism seem to explain important features of contemporary economic interdependence. In fact, the amount of international trade has steadily increased in the last decades, confirming that the states seek to increase their wealth and that economic interdependence is possible and pursued even in fundamentally anarchic systems, in accordance with the hypotheses of commercial liberalism. Moreover, democracy results to exert a steady and remarkably positive effect on bilateral trade flows that corroborates the assumptions of republican liberalism, while international institutions stimulate commerce among their members reinforcing institutional liberalism. On the other hand, realist concerns for international security issues and the hypotheses according to which military alliances should be the best signals for reliable commercial partners are confirmed by the results of the empirical analysis, which show a constant and really positive effect of all types of alliance considered on the amount of goods exchanged. A noteworthy outcome of the chapter from the realist point of view derives from the study of the dataset that includes only the great powers. Such states seem to be particularly aware of the risks that could originate from interdependence with adversaries even in the age of globalization, so that in their reciprocal relationships the realist variables remain relevant, while the importance of the liberal ones is quite reduced. Considering these empirical results, one cannot fail to appreciate the importance of approaches and models that try to integrate both realist and liberal understandings of international politics, such as the one proposed by Powell, since they seem the best strategy to explain the current international relations.[261]

At a more general level, this study is clearly insufficient to draw a clear picture of the main features of the post-bipolar system. Nonetheless, some indirect hypotheses can be formulated on the polar configuration of the present world. From this perspective, if the bipolar system we were used to during the Cold War seems to be disappeared, neither the perspective of the dissolution of the state nor the view of a unipolar world seem to reflect the empirical results of the analyses on economic interdependence. On the one hand, states appear to be still important, even though to a lesser extent than

[261] See Powell, 1991; 1993.

in the previous decades. On the other hand, my empirical research does not highlight behaviors of the major powers that would be consistent with the hegemonic stability theory, since security concerns are still relevant even among these states, which seem far from being subject to the same undisputed hegemonic power. Rather, the image that best fits the results of this analysis on economic interdependence portrays the international system as a fundamentally multipolar context, where in this moment power is quite unevenly distributed, but that is nonetheless slowly moving towards a more clearly multipolar configuration. This perspective is not very reassuring if we consider the probability of war,[262] but the positive features that distinguish the current system from previous multipolar or quasi-multipolar systems, however, are represented by the great and increasing number of democracies as well as by the thick web of multiple international organizations that bound all contemporary international relations to a degree previously unknown. As we have seen, according to the empirical results both these phenomena reduce the probabilities of armed conflicts.

[262] Mearsheimer claims that unbalanced multipolarity is the most dangerous polar configuration for the international system. See Mearsheimer, 2001.

3. INTERDEPENDENCE THROUGH FDI

3.1 Introduction

The relationship between international economics and international politics has been the centre of many theoretical debates at least since the Enlightenment. The realist, liberal and Marxist schools of thought, with their successive developments, provided many precious insights on the links between these two distinct though connected spheres of international reality. Nonetheless, only in the last fifteen years deep and punctual quantitative studies have carried out the effort of matching theories with empirical data.[263] If some of these studies have focused on the effects of economic interdependence on political outcomes such as war, peace or the development of democracy, others have looked at the other side of the coin, studying the influence of political variables on the level of economic interdependence among states. The latter branch of works has tended to concentrate on the commercial dimension of interdependence: although it is in the same stream, this chapter aims to study such a complex issue expanding the operational definition of economic interdependence and taking into consideration the dynamics of international direct investments. Foreign direct investments (FDI) flows exhibit an increasingly important dynamics in contemporary economic interdependence, but they have been hardly studied in international relations (IR) literature; we have only some

[263] For a complete overview of the classical theories linking international politics and international economics see Gilpin, 1987.

hypotheses and a few contradictory proofs of the relationships existing between the realm of international politics and the determinants of FDI flows. This chapter contributes to fill this gap, investigating how central issues of international security – such as the existence of alliances or the peculiarities of democratic regimes stressed by the democratic peace theory – have influenced the choices of international investors in the last ten years of the Cold War and in the first period of the post-bipolar system.

It is essential to take in due consideration the hypotheses and the lines of thought we have inherited by the realist and the liberal views on the links between politics and economics at the international level. Nevertheless, no linear and simple relationship between these two spheres seems to be adequate to describe the reality of facts, especially nowadays. The literature in the field could be considered ambiguous as it is characterized by mixed results, but in its essence it reflects the complex ways in which international politics and international economics are bound together by the knot of interdependence in its various forms and degrees. For these reasons, I will include in my analysis both "realist" and "liberal" variables, to evaluate the respective relevance of these two traditions for the issue under scrutiny. I believe that both of them are useful to understand the complexity of reality, albeit I expect a greater explicative power of realism in the study of the Cold War years.

This chapter concentrates on the dimension of economic interdependence represented by FDI, which are the part of international financial flows more closely linked to the new processes of international production and distribution of goods. I will neglect the role of portfolio investments (government bonds, currency, equities), which can have a more speculative character and are usually more volatile.[264] The importance of this complex phenomenon can be evaluated if we recall that multinational corporations are now responsible of about 70 per cent of the world trade and that the sales of their foreign affiliates have exceeded total global exports at the end of the nineties.[265] On the other hand, FDI has grown steadily more than trade during all the nineties, with just a reduction between 2001 and 2003, to increase again in 2004 and 2005.[266]

FDI are defined by the IMF as those investments that allow the parent firm to control more than 10 percent of the foreign affiliate and given their connection to production processes, FDI represent important sources of physical capital, employment possibilities and, most of all, technology and knowledge transfer from the productive system of the home country to that of the host country. Given their relevant impact, enhanced by their increasingly acknowledged role in promoting growth, FDI are susceptible of the same reasoning that filled the debate between realists and liberals about international trade as the traditional dimension of economic interdependence.267 Do FDI follow economic profit or the flag? Since they are able to produce richness, technological advance and, as an indirect consequence, power, are they influenced by the relations among states? Are they influenced by the patterns of alliances, competition for power, relationships among democracies or by features of the system such as polarity and its stability? Are international politics and international security relevant for these

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[264] See Goldstein and Razin, 2006.

[265] See Held, McGrew, Goldblatt and Perraton, 1999.

[266] See IFC, 1997; OECD, 2006.

[267] See Grossman and Helpman, 1991; Borensztein, De Gregorio and Lee, 1998; De Mello, 1999.

growingly important financial flows or is this a case of unilateral influence of economics on international politics? Some studies exist on the relations between FDI flows and political regimes at the unit level, obtaining some interesting although contrasting results on the reciprocal relation between democracy and FDI, thus confirming the complexity of the field.[268] However, to the best of my knowledge nobody has ever tried to study the relations between the variables I mentioned, which belong to an intermediate level between the unit and the structural ones,[269] and FDI. The first section of this chapter is dedicated to a succinct review of the relevant literature to provide a framework of reference. The second section briefly deals with the economic theories concerning the determinants of FDI and their increasing diffusion, while the third one exposes the political issues at stake. The forth and the fifth sections present the questions that should be answered by the chapter, the source and the features of the database I used as well as the characteristics of the variables considered and the statistical methods employed. The sixth section is dedicated to a description of the results that derive from the quantitative analysis, while in the last brief paragraph I try to sketch the first conclusions that can be drawn from the results of the study.

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[268] See Jensen, 2003; Li and Resnick, 2003; Jakobsen and De Soysa, 2006. On the effects of international investment flows on democracy, see De Soysa and Oneal, 1999; Li and Reuveny, 2003.

[269] The relationships' level is a semi-systemic level of the international system where variables such as alliances; degrees of economic dependence/interdependence; degrees of polarization define the situational contexts within which the interactions among states take place. These contexts are not neutral, but exert independent effects on the behaviors of actors. See Snyder, 1996; Schweller and Priess, 1997; Costalli, 2007.

3.2 Different Branches of Literature Meeting

Among the empirical studies that have analyzed the influence of political variables on the level of economic interdependence focusing on relational variables, interesting results have been obtained by Pollins in two different articles, thanks to the inclusion of an indicator of diplomatic relations between trade partners in the gravity model for international trade.[270] He finds that in the '60s and the '70s international conflict and cooperation affected commerce in a significant way: importers and exporters resulted to be well aware of the security concerns associated with international economic flows, as well as of the different risks of trading with friends and adversaries of their home countries.[271] In addition, Pollins shows that states tended to react to changes in the condition of their relations with trade partners by means of interventions designed to politically manage the trade flows that linked them. Those states that were less integrated in the world market, that used to feel their objectives of political development threatened by the forces of international economy in action and that used to manage trade relations in a marked direct way were more sensitive to changes in the level of conflict/cooperation than those states that were more integrated into the world economy.[272]

Gowa and Mansfield support the idea that due to the security externalities created by international trade flows, free-trade could be a suboptimal policy in an anarchic environment. They use the prisoner's dilemma to describe the difference in tariff games between allies and between adversaries and

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[270] See Pollins, 1989a; 1989b.
[271] See Pollins, 1989a.
[272] See Pollins, 1989b.

undertake the first analysis of the influence of alliances on international trade.[273] In the anarchic international system, states have to be always aware of relative power:[274] trading with allies increases the power and hence the security of the entire alliance, while trading with adversaries can be really counterproductive. Additionally, firms that engage in relation-specific investments abroad are exposed to opportunistic behaviors by host governments, but such governments have far less incentives to behave opportunistically and disrupt trade relations if firms come from allied countries. Gowa and Mansfield take into consideration bilateral trade flows among the great powers from 1905 to 1985 and find that alliances have a direct and statistically significant effect on bilateral trade. Their results support the hypothesis according to which allies are more likely to trade with each other than are non allied states and as regards the effect of system level variables, the alliances embedded in the bipolar system of the Cold War seem to have had stronger effects on trade than their counterparts in the multipolar system that preceded World War II.[275]

Following the same reasoning, Long analyzes the dyadic trade flows among the great powers from 1885 to 1990 and adopts the new Alliance Treaty Obligations and Provisions (ATOP) dataset, which has been realized dividing alliances into several categories having regards to the general obligations of the members.[276] He asserts that the only alliances that really increase trade significantly between their members are those

[273] See Gowa and Mansfield, 1993.
[274] See Waltz, 1979.
[275] Joanne Gowa had already hypothesized a different effect of alliances on trade in bipolar and multipolar systems some years earlier in Gowa, 1989.
[276] See Long, 2003.

implying commitments to provide military assistance to each other in case of attack, the so-called defense pacts. On the contrary, trade between members of non-defense pacts is statistically indistinguishable from trade between non-allies and after having controlled for these different types of alliances Long stresses the fact that also the distinction between bipolar and multipolar systems has hardly any relevance to explain the variation in the influence of alliances on trade.

Gowa and Mansfield explicitly acknowledge the views of the new trade theory, which explains massive trade flows among countries characterized by similar factor endowments with product diversification coupled with increasing returns to scale. In this light they study the influence of alliances on this phenomenon through an analysis of bilateral trade flows among the great powers between 1907 and 1991.[277] As it was expected, they find that if alliances increase trade in general, they are particularly effective for increasing returns-to-scale-trade, which occupies a progressively larger percentage of total trade, especially among the most advanced economies.

Finally, Long and Leeds have recently analyzed the impact on trade exerted by the alliances that included provisions on economic cooperation and were in force among European states before WWII.[278] Their research proves that such treaties increased trade between allies much more than simple alliance treaties did, but in a way it just confirms what was largely expected, namely that states stipulate particular kinds of treaties because they have interests in doing so. Unfortunately, this last specification is not compared with the previous ones based on

[277] See Gowa and Mansfield, 2004.
[278] See Long and Leeds, 2006.

the distinction between defense and non-defense pacts, so that we are not able to verify which is the most significant one and if there is any sort of correlation between the variables. Nonetheless, this latter study reinforces the idea that international security and economic interdependence are connected fields, that the relation between them is a complex one and that states often tend to reach different goals at the same time and that they are used to doing it through different, sometimes mixed and ambivalent means. On the same path towards complexity, Mansfield and Bronson had already analyzed the trade flows between 1960 and 1990 and proved that if both alliances and preferential trade agreements increase trade among their members, states that are parties to both kinds of institutions engage in markedly larger trade than those that are members of only one of these arrangements.[279]

As it can be easily noticed, all these preceding studies assessing the influence of system and relationships' level political variables on economic interdependence among states use trade flows as their common dependent variable. The same is true for the branch of studies that analyzes the influence of unit level political variables and that have in different ways verified the existence of a rather stable and positive relation between the diffusion of democratic regimes and the expansion of trade flows, through a tendency of democracies to lower trade barriers and to develop various forms of bilateral and multilateral economic cooperation.[280]

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[279] See Mansfield and Bronson, 1997a.

[280] See Morrow, Siverson and Tabares, 1998; Mansfield, Milner and Rosendorff, 2000; Russett and Oneal, 2001; Mansfield, Milner and Rosendorff, 2002; Milner and Kubota, 2005.

However, economic interdependence is far from being confined only to trade flows especially in the age of globalization, as all general statistical reports demonstrate. On the contrary, the most impressive feature of today's increasing economic interdependence is the expansion of capital flows and the development of capital markets. The risks and/or the benefits of increasing interdependence are not limited to trade flows. The link between international security and interdependence, as well as the relations between democracy and openness to the world economy, concern also the sphere of capital flows, that are nowadays able to move greater amounts of richness than trade in much shorter time periods. For this reason, it is particularly important to test classic theories linking international politics and international economics with a broader understanding of economic interdependence, trying to use data on different dimensions of such phenomenon. FDI flows are a relatively new phenomenon and they have acquired massive features in the last twenty-five years, so that even in the economic literature empirical studies are not so common, especially because of the relative shortage of data enabling wide and deep analyses. Most of such studies have concentrated on the flows of investments from the most developed to developing countries or on the investments carried out by many western states in the eastern European states during the nineties, in order to understand the effects of such investments on growth and on the structure of the productive systems of host countries.[281] In the field of IR, some have tried to study the impact of FDI inflows on the political regime of host countries, especially if such countries are experiencing a transition to democracy or a phase of democracy

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[281] See, among others, Resmini, 2000; Markusen, 2001; Kaminski and Smarzynska, 2001; Javorcik, 2004.

consolidation, in order to understand if massive foreign investments interact in some ways with the life of such regimes, either helping or contrasting the life of democratic institutions.[282] Very few studies have tried to use investment flows as their dependent variable with the aim of assessing the eventual impact of political variables on FDI flows, and those who have tried have obtained contradictory results.

Jensen analyzes FDI inflows experienced by more than 100 countries thanks to a series of cross-sections and a time-series cross-sectional analysis embracing the period from 1970 to 1997.[283] His dependent variable is FDI inflows in the country considered in a given year and all the economic and political independent variables he uses are situated at the unit level. He asserts that the limitations imposed to leaders by democratic regimes increase the predictability of democratic economic policies as well as their stability through time, so that foreign firms that decide to invest in a democratic host country have to face lower risks of opportunism. According to this theory, democracies should be a safer and more comfortable environment for foreign investments because of two main reasons. On the one hand the existence of more veto players than in autocratic regimes makes democratic policies more stable and predictable, while on the other hand the possibility for leaders to be replaced in elections lowers their freedom to renege on promises made to international markets, since such a behavior could have negative consequences on the whole nation and be

[282] See Li and Reuveny, 2003.
[283] See Jensen, 2003.

also the signal of unreliability on other issues.[284] After having controlled for the variables that recur more frequently in the economic literature on FDI, such as GDP, GDP per capita, growth and natural resources endowment of the host country, democracy seems to have a statistically significant and remarkably positive effect on FDI inflows both in the cross-sections and in the panel analysis.

Differently from Jensen, Li and Resnick maintain that the influence of democracy on FDI inflows is much more ambiguous.[285] On the one hand, they agree with North and Olson that democratic institutions are usually more effective at securing private property rights, thus reducing the risks of expropriation, contract repudiation and uncertain judicial procedures foreign firms have to face thus encouraging FDI inflows.[286] On the other hand, however, Li and Resnick underline that democratic institutions could discourage FDI inflows for at least three reasons. First, democratically elected governments will probably tend to limit the propensity of foreign MNEs to increase their market power without bounds and act in a quasi-monopolistic or oligopolistic environment to increase returns, since they have to preserve and possibly increase the wealth of their national constituencies in order to be reelected. Secondly, as MNEs are usually more efficient and competitive than many firms in developing host countries, FDI help to better allocate resources, but at the same time displace local firms that have strong incentives to lobby for protective measures from the

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[284] See Tsebelis, 1995; Jensen, 2003. Fearon, 1994 showed that democracies are more credible in their intentions, including in stipulating agreements on the international scene, because of signaling costs.
[285] See Li and Resnick, 2003.
[286] See Li and Resnick, 2003; North, 1990; Olson, 1993.

government. Finally, democratic governments have to face more limitations than autocratic regimes even in granting fiscal and financial incentives to foreign investors with the aim of attracting more FDI. Inducements to foreign firms constitute transfers of benefits from domestic taxpayers to alien actors, probably raising the criticism of sectors of the society and strengthening the political opposition.[287] With these points in mind, Li and Resnick analyze the FDI inflows of fifty-three countries from 1982 to 1995 separating the positive from the negative effects of democracy and they find that a better property rights protection increases FDI inflows with a statistically significant impact, while the presence of democratic institutions per se, once controlled for the preceding variable, exerts a slightly negative effect on the arrival of foreign capital.[288]

All the political variables that have been considered by these studies on FDI belong to the unit level of the international system, so that none of them can tell us anything about a possible role of the state of relations between countries and FDI flows. In this way any possible connection between the dynamics of international security and the massive transfers of resources represented by FDI remain to be assessed. This chapter represents a first effort to fill this gap, but before entering the empirical part, the next section briefly deals with the economic theories of FDI diffusion.

[287] For an empirical study that confirms the tendency of democratic regimes to concede less fiscal and financial incentives, see Li, 2006a.
[288] See Li and Resnick, 2003.

3.3 Some Economic Rationale for FDI Diffusion

FDI are inescapably linked to the activity of MNEs and FDI diffusion is strongly related to the increasing role played by this particular kind of firm in the world economy, so that it is important to have at least some basic knowledge of the reasons that can lead a firm to become multinational and to make investments abroad. Firms can decide to engage in direct investments in foreign countries for various reasons, so that John Dunning divided MNEs into four large categories: resource seekers, market seekers, efficiency seekers and strategic asset or capability seekers.[289] Whatever the aim of their quest, foreign affiliates will take either the form of vertical or horizontal FDI, which are not mutually exclusive, since large MNEs have complex structures and they can have different reasons and opportunities to install plants with distinct tasks in different countries. Vertical FDI serve the purpose of setting up plants that will enter the contemporary circuit of fragmentation of production across countries and will produce only a part of the final product, so being at the base of the expanding phenomenon of intra-firm trade.[290] Horizontal FDI, on the contrary, refer to investments in foreign production facilities that are designed to supply customers in the foreign market and therefore substitute exports of the final products that otherwise should be produced in the home country.[291]

Dunning's ownership, location and internalization (OLI) eclectic model is the reference model for the theory of MNEs investments abroad, according to which firms invest abroad if so

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[289] See Dunning, 1993, p. 56.

[290] A seminal model of International trade with vertical MNEs was put forward in Helpman, 1984.

[291] See Ethier and Markusen, 1996.

doing they are able to exploit advantages in terms of ownership, location or internalization.[292] Multinational firms have advantages in terms of ownership over host countries' national firms and they are therefore able to successfully enter foreign markets and realize increasing returns if they have exclusive access to assets or processes that provide them advantages over such firms. Ownership can refer to physical goods such as new patented products or production techniques, but also to more intangible ones such as ability to innovate products, marketing systems, organization of work or global brand name recognition. Location advantages are instead related to the characteristics of the country that should host the direct investment and could derive from natural resources as well as being the result of public policy implementation. MNEs can decide to invest in a country, export toward its market or renounce to supply it depending on the prices, quality and productivity of the input factors; the costs of transports and communication; the incentives and disincentives to foreign investments; policy barriers to trade; legal provisions; local infrastructures and on cross-country cultural differences. Finally, internalization advantages concern the reasons why multinational firms decide to produce abroad within their organizations instead of licensing foreign firms to produce their articles. Internalizing production through foreign affiliates allows MNEs to avoid costs of negotiations, the ones due to moral hazard and adverse selection as well as the costs deriving from broken license contracts and from the judicial solution of litigations. It allows also to control the supplies of inputs in terms of price and quality as well as to capture eventual economies of interdependent activities.[293]

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[292] See Dunning, 1988; 1993.

[293] See Dunning, 1993, p.81; Jensen, 2003.

Apart from this industrial-organization approach to MNEs' decisions to invest abroad, other more stylized and formal models have been proposed by economists, even drawing on the insights provided by Dunning's framework. Some of them have concentrated on vertical investments dictated by differences in capital intensity among various stages of the production process, but they usually assume no trade costs and have some problems in explaining why some firms are used to producing the same goods and services in the same ways in different locations, given plant-level scale economies. So, even in consideration of the fact that horizontal FDI seem to be more prevalent in the world economy, recent research has concentrated especially on this second kind of investment strategies. Markusen delineated the first formal model to explain this latter phenomenon and interpreted it by means of the introduction of firms-level economies of scale that integrate across national borders.[294] Later on, the same author has proposed a "knowledge-capital model" that allows for the contemporary existence of vertical and horizontal FDI.[295] This model is based on three fundamental assumptions. First, services of knowledge-based and knowledge-generating activities, such as R&D, can be geographically separated from production and supplied to production facilities at low cost. Second, these knowledge-intensive activities are skilled-labor-intensive relative to production. Third, knowledge-based services have a (partial) joint-input characteristic, in that they can be utilized

[294] See Markusen, 1984.
[295] See Markusen, 1997.

simultaneously by multiple production facilities.[296] The first two assumptions create a motive for the vertical fragmentation of production, while the third one creates firm-level scale economies and motivates horizontal investments that replicate the same products or services in different locations. This sophisticated approach takes into consideration the issues acknowledged by the new trade theory, since it allows for trade costs and assumes that national markets are segmented. It formulates also hypotheses on the features of the countries involved, but it fails to include among such relevant country features any political and institutional variable.

Nonetheless, one of the most interesting issues about FDI is that even though in the last resort they depend on private decisions made by firms' managers, they are strongly influenced by the characteristics of the countries where they take place. Thus it seems improbable that the only relevant features are the economic fundamentals of those countries, with no space for any institutional aspect or for any policy that could be implemented by public authorities. Admittedly, there are important determinants of FDI that are strictly related to the attributes of the sector the firms operate in and also to the attributes of the single firm.[297] Nonetheless, it seems likely that an interaction

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[296] To give a practical idea of this assumption we can think that headquarters services (blueprints, manuals, formulas, procedures, etc.) can be supplied to additional plants at low marginal cost.

[297] Recently Helpman, Melitz and Yeaple, 2004 have convincingly presented the hypothesis according to which within-sector firm productivity differences can significantly influence the choice of firms between exporting their goods and investing abroad. Put it very simply, every industry comprises heterogeneous firms with different productivity levels. Low-productivity firms choose to serve only the internal market; firms with a medium productivity level choose to

between private and public actors can exert some remarkable influence on the decisions regarding eventual investments in a determinate context of slowly changing features.

3.4 The Political Issues

IR literature so far has put into evidence that one of the most relevant reasons why alliances can enhance international trade is their ability to reduce the risks implied by the relation-specific investments firms often have to make to enter foreign markets and the consequent sunk costs they incur.[298] It has been noticed that taking into consideration the new trade theory provides a solid explanation of such a phenomenon, presenting also a broader picture of contemporary international trade and clarifying some points of the recent and pervasive phenomenon of intra-industry trade.[299] Studying the dynamics of FDI allows us to go further and complete this line of thought. We will be able to consider intra-industry trade, appraise the decisions that are at the basis of intra-firm trade resulting from vertical FDI and expand our knowledge to the increasingly relevant trend of horizontal FDI, which for firms represent a substitute of international trade.

Trying to assess the impact of international politics on international investments, it is necessary to take into account the interplay of two distinct but connected dimensions. On the first dimension firms represent the main actors, while on the second

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serve also foreign markets through trade; in the end, the most productive firms choose to serve foreign markets engaging in FDI.

[298] See Mansfield and Bronson, 1997a.

[299] See Gowa and Mansfield, 2004.

one the same role is embodied by states, and both these types of actors experience a "quest for security" approaching international direct investments. If it is true that trading firms often engage in relation-specific investments that are difficult to regain or convert, such issue is even more important for firms planning to set up plants abroad, since FDI are very liquid *ex ante*, but relatively illiquid *ex post*. Once foreign capital has been invested, foreign firms are exposed to significant political risks due to possible policy changes decided by host governments, which could enact opportunistic policies and harm foreign firms' interests in many ways.[300] This is the reason why it makes sense to check the influences of unit level political, legal and institutional variables on FDI flows, as some IR scholars have recently done. Besides, given that political variables can act at the same time on the level of relationships among states, I will also attempt a direct assessment of the relevance of semi-systemic and even systemic political dynamics for global FDI flows, to allow a more complete evaluation of the influence the sphere of security exerts on this dimension of economic interdependence. Firms clearly want their investments to be profitable and for this reason they evaluate their internal business situation as well as the economic characteristics of the eventual host country. Nonetheless, they also want their investments to be secure, and from this point of view they have to take into consideration the political features of the context they have under scrutiny, in direct or in indirect ways.

The first political risk foreign firms have to be afraid of is obviously war and, given the period in which FDI have begun to proliferate, especially the eventuality of civil wars, since

[300] See Rosecrance and Thompson, 2003.

interstate wars have become particularly rare events. Apart from the direct damage that could derive from war and the actual use of violence, such as killings and destruction of infrastructures, the involvement of the host country in an armed conflict entails also indirect risks for the foreign investors. Financially expensive and politically costly warfare often drives governments to impose capital controls and prevent capital flight, as well as requiring higher tax rates. In addition, the outcomes of civil wars often result in regime changes that are typically associated with policy changes, such as expropriation of foreign assets and breaching contracts between MNEs and former regimes.[301] If firms have to guarantee their investments from different risks, they will look for signals of security, and these signals will probably acquire different forms, corresponding to diverse risks and rationales. Investing in a country that shares an alliance pact with the firm's home country not only signals to the firm that the two countries considered will unlikely fight a war against each other. Above all in fact alliances communicate to the firms that the governments involved have far less incentives to behave opportunistically and disrupt good economic relations with their allies than they have with respect to potential or real adversaries. As a result, firms that want to operate abroad limiting risks are expected to lead their businesses towards allied markets.

Another meaningful signal for firms willing to invest abroad could be democracy, since the presence of a well-established democratic regime in the host country can be an indicator of limited risks for various reasons. On the one hand, democracies can suffer some disadvantages in attracting foreign capitals if compared to autocracies, since democratic

[301] See Li, 2006b.

governments have to face more bonds for instance in granting fiscal incentives to international investors.[302] On the other hand, however, democracies seem to have more important positive features to be regarded by firms as privileged destinations for FDI. Firstly, it has been acknowledged that liberal democracies assure a more reliable protection of private property rights, since parliaments imply the political representation of a wide range of different interests facilitating their mobilization and concur with the presence of independent judiciaries to make it difficult for governments to violate such property rights in order to favor a particular group.[303] In addition, and probably most importantly, the many limitations and multiple veto players democratic governments have to face greatly increase the stability and the predictability of democratic public policies, also thanks to the more transparent decision making procedures the democratic bodies have to follow. Since FDI imply long-term commitments on the part of foreign firms,[304] one of the most important issues for investors is the stability of the relevant policies and therefore of the conditions under which they decided to make the investment at stake. As Tsebelis underlines, decisiveness in changing the status quo is a good quality for a political system when the status quo is undesirable, but if the (especially economic and business-related) circumstances deserve a positive evaluation (the presence of positive conditions at the moment of the decision is also the underlying premise of the hypothesis supporting the advantages of autocracies), then conservation of the desirable status quo is preferable.[305] From this point of view,

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[302] See Li and Resnick, 2003.

[303] See Li and Resnick, 2003; North, 1990; Olson, 1993.

[304] See Li, 2006b; Rosecrance and Thompson, 2003.

[305] See Tsebelis, 1995.

the best regime for FDI would be able to grant remarkable incentives without ties like autocracies and at the same time to signal long-term stability and predictability like democracies. Attempts in this direction probably could be found around the world.

Democracies, however, can be rewarded by international investors for another reason too, especially if firms have their headquarters in a democratic regime (as it is in the majority of cases): namely because it is now well known that democracies usually do not fight each other. This view points to consider the issue of democracy not only as a unit attribute, but also in a relational perspective, to highlight the importance of political and security variables at the relationships' level and to introduce the role of states, which are the main actors on the second dimension I mentioned at the beginning of this section. As a matter of fact, FDI ultimately depend on private decisions, but firms' managers cannot underestimate the incentives and the signals coming from the relationships' level and indicating the type of security relations their home country entertains with the host. Investing millions dollars on the soil of an adversary with a long time horizon can be doubly dangerous: risking to be considered a "traitor" by the home government and a possible prey by the host authorities.

Flows of FDI imply massive transfers of politically relevant measures from a country to another, such as richness (that goes from country A to country B in the form of investment and then goes back in the form of private profits); technology and various forms of know-how; significant shifts in the labor markets of both countries. In addition, FDI have been found to usually increase the efficiency of the economic systems of host countries and to promote growth, so that all the concerns raised by realists about trade seem to be relevant also for this different dimension of interdependence embodied by FDI. In other words, it appears plausible that states should be no less interested in trying to select the right investment partners than they are to select the right trade counterparts. If states try to shape trade flows paying attention to the profiles of alliances and to the state of relations they have with other countries, intervening to modify the conditions on which firms decisions are based, why should they behave differently in respect to FDI? And if private actors take in due consideration such incentives and disincentives in their decisions about trade, why should they behave differently when FDI are at stake? I hypothesize that variables related to security relations among states and to power competition have a direct relevant influence on FDI flows, so that I expect a remarkable positive effect of alliances, especially during the cold war, when the competition for power and security used to be harsher. Nevertheless, I also expect a relevant positive effect of democracy, both because of the inner features of such regime and the more security-related reasons highlighted by the democratic peace theory.

3.5 Research Design

This study starts from the will to enhance our knowledge of the relationships existing between international politics and international economics, expanding the operational definition of economic interdependence through direct empirical research on FDI flows, which represent an increasingly important dimension of economic interdependence often overlooked in existing literature. A few seminal works have recently investigated the role played by some political variables belonging to the unit level of the international system in the dynamics of international investment flows, while I am particularly interested in the eventual influence exerted on FDI flows by variables situated at the relationships' level, such as various types of alliances. Focusing on those variables that are inherently relational allows us to raise our knowledge of the interactions between amity/enmity relations among states and international economic flows, between international security issues and economic interdependence. In addition, the available studies on "political variables and FDI" have concentrated mainly on the role of internal regimes and especially of democracy, following a typical liberal strategy and failing to include in their models control variables responding to realist logics. I included in my quantitative analysis variables such as the configuration of alliances and the inheritance of colonial ties, which are more focused on the logics of power and security. This strategy allows us to compare the relative relevance of the liberal and the realist theories, giving at the same time a more complete representation of the complexity of the issue.

In order to undertake a quantitative analysis aimed at studying the weight of the relations among states, I could not use as my dependent variable the simple amount of FDI inflows registered by a state in a given year, like in the previous studies I have mentioned. On the contrary, I had to build a database where the unit of analysis is represented by the dyad-year, similarly to what is usually done in the studies on international trade, and where the dependent variable is represented by bilateral FDI flows in a given year. The dyads and the time frame have been determined by the dimensions of the *International Direct Investment by Country vol. 2002, rel. 2* database of the OECD, which is the only accessible database, at least to my knowledge, with bilateral data of FDI flows. It contains data on FDI flows and positions for 30 home countries vs. more than 100 host countries from 1980 to 2004, even though data before 1985 are not so abundant. I decided to maintain the same time frame and especially the same combination of dyads provided by the complete dataset in its most extended version in order to limit problems of biasedness and to give the most general picture available of the phenomenon under consideration, given that this is the first study of this kind.[306]

Briefly, the database I have built is composed of two main parts. The first one includes a series of economic variables, such as the omnipresent GDP, containing data on the dyads or on the single members that compose them. These variables, some of which have been used to conduct preliminary operations and will not be included in the following presentation of the relevant variables, usually come from the *World Development Indicators 2006* of the World Bank. The second part of the database, instead, is the one we are more interested in and it includes political variables of various kind, some of which are usually recalled in realist analyses, while others are often stressed in liberal narratives; some belong to the unit level of the international system, while others belong to the relationships' level. These data have been collected using various different political databases such as the ones comprised in the *Correlates of War Project*.

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[306] The "home countries" included in the database are: Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, United Kingdom and United States.

3.5.1 The Model and Some Expected Results

I have constructed my model trying to integrate insights from the IR literature on bilateral international trade and from both the economic and IR literatures on FDI, so that in the end my model is basically a version of the gravity model widely used in the analyses of international trade. A number of political variables are expressly added to the usual economic ones and with GDP per capita of the countries that compose the dyads replacing data on their populations. I preferred to use GDP per capita because in addition to taking into consideration the populations both of the home and the target states, such an index can be considered a measure of development, giving more significant information on the determinants of FDI flows.[307] The basic model I have tested can be synthetically written:

$$\text{FDI Outflows}_{ij(t)} = \alpha + \beta_{ij}(\text{economic variables}_{(t-1)}) + \gamma_{ij}(\text{political variables}_{(t-1)}) + \varepsilon_{ij}$$

DEPENDENT VARIABLE:

The dependent variable is represented by the stock of FDI of home country *i* into host country *j* in year *t*, averaged for four-year periods.[308] As I have already mentioned, this variable comes from the FDI statistics of the OECD and it is measured in current US dollars. International investments are coded as FDI if they

[307] Gowa and Mansfield used the same version of the gravity equation in Gowa and Mansfield, 2004.

[308] Outward stocks of FDI represent the total value of capital invested by private enterprises of one country into another country. I preferred to use these data instead of the direct values of flows each year because of their better quality and more stability, even if the number of observations is a bit smaller.

acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor.

<u>INDEPENDENT VARIABLES</u>:

MARKET SIZE OF THE HOST COUNTRY ($MKTSIZE_j$) – The first economic independent variable to take into consideration is the market size of the host country. It has been repeatedly found to be a factor of attraction for both foreign trade and FDI inflows,[309] so that it could result to be a significant point also in the decision whether to invest in a given country or not, especially for horizontal FDI. I decided to include it and follow the convention of measuring it with the GDP, expressed in current US dollars as reported in the *World Development Indicators 2006* of the World Bank.

MARKET SIZE OF THE HOME COUNTRY ($MKTSIZE_i$) – The second economic variable I control for is the market size of the home country. It is not included in previous IR studies on FDI since they do not have a bilateral structure, but it is included in the studies on international trade.[310] Following the same convention I have used for $MKTSIZE_j$, I measure it with the GDP expressed in current US dollars as reported by the World Bank and I expect it to exert a positive effect on FDI. Given that we are dealing with FDI outflows, it is likely that a larger GDP, which is an indicator of a bigger economic system, produce larger investment outflows abroad.

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[309] See Gowa and Mansfield, 1993; Mansfield and Bronson, 1997a; Li and Resnick, 2003.
[310] See Gowa and Mansfield, 1993; Mansfield and Bronson, 1997a; Gowa and Mansfield, 2004.

ECONOMIC DEVELOPMENT OF THE HOST COUNTRY ($DEVEL_j$) – The economic development of the host country is measured by GDP per capita based on PPP, expressed in current international dollars as reported by the World Bank. Besides being included in recent studies on international bilateral trade, such a variable is included in the ones on FDI[311] and I assume a positive effect in attracting FDI.

ECONOMIC DEVELOPMENT OF THE HOME COUNTRY ($DEVEL_i$) – Following the same methods, economic development of the home country is expressed by its GDP per capita and I expect it to have a relevant positive effect on FDI outflows, since according to economic theory firms have to be relatively complex and productive to invest abroad and usually they are based in the most developed countries.

GOVERNMENT EXPENDITURE OF THE HOST COUNTRY ($GOVEXP_j$) – This variable measures the amount of public spending in the host country as a percentage of GDP. It is an indicator of the relevance of state action in the economic system and it has been found to discourage FDI.[312] Data are from the World Bank *Indicators*.

CAPITAL ACCOUNT RESTRICTIONS ($CAPRESTR_j$) – Capital flow restrictions erect barriers to entry into a country, barriers to exit from a country, or both. Under various restrictions, a foreign investor may have difficulty getting into a country, be trapped on shore after investing, or both. Barriers to capital account flows can have negative effects on FDI.[313] This is a dummy variable coded 1 when the host country imposes

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[311] See Gowa and Mansfield, 2004; Jensen, 2003; Li and Resnick, 2003.
[312] See Jensen, 2003.
[313] See Li and Resnick, 2003.

restrictions to capital flows and 0 when capitals can move freely. Data are from IMF's *Annual Reports on Exchange Arrangements and Exchange Controls*.[314]

PROPERTY RIGHTS PROTECTION IN THE HOST COUNTRY ($PROPERTY_j$) – I included the level of property rights protection in the host country in some models since it has been indicated as an important feature of internal democracy. This variable is based on expert-generated data from the International Country Risk Guide (ICRG). My property rights protection measure runs from 0 to 60 and is a weighted average of four variables included in ICRG's political risk index: investment profile, quality of bureaucracy, corruption and law and order.[315]

NATURAL RESOURCES OF THE HOST COUNTRY ($NATRES_j$) – I included this variable in the model since it could be a determinant of FDI made to exploit location advantages, especially in the first period of FDI expansion.[316] To measure the amount of natural resources, I have constructed an index that consists it the sum of exports of agricultural raw materials, fuel and metals as a percentage of total merchandise exports of the

[314] In the last years, the IMF has elaborated a more complex form of measurement based on 13 types of capital controls, but since it goes back only to 1995 while my database starts in 1980 I decided to use the old simpler variable. I thank Harald Anderson from the Monetary and Exchange Regimes Division of the IMF for having made available the file versions of both forms of data.

[315] This variable is exactly the same used by Jakobsen and De Soysa, 2006 and it is very similar to the one used by Li and Resnick, 2003. The differences between my measure and the one used in Li and Resnick are due to some changes in naming and weighting of the individual variables included in the ICRG's political risk index that have been introduced in the last few years.

[316] Natural resources have been taken into consideration as determinants of FDI in Jensen, 2003, even though he uses a different measure.

host country. Data on the three individual variables are from the World Bank *Indicators*.

DISTANCE BETWEEN THE HOME AND THE HOST COUNTRY (DIST) – This variable is included nearly in all studies on international bilateral trade even though it is excluded from previous IR studies on FDI for the obvious reason that they didn't have a bilateral structure. Following the rationale that lies behind the inclusion of this variable in analyses of international trade, I chose to include it also in my research, and I expect it to have a negative impact. The data on distances between countries are from the database provided by the Centre d'Etudes Prospectives et d'Informations Internationales (CEPII) and are expressed in kilometers.[317]

CONTIGUITY BETWEEN THE HOME AND THE HOST COUNTRY (CONTIG) – Contiguity is a dummy variable that in a way specifies the distance variable. It is coded 1 if the countries included in the dyad share a border and 0 otherwise. Data come from the same CEPII database I used for data on distances.

COMMON OFFICIAL LANGUAGE (COMMLANG) – This is a variable that accounts for the influence of cultural factors on FDI flows. I included it in my analysis since the degree of cultural similarity can affect economic activities in various ways and it could be especially important in long-term economic relationships, where mutual understanding and trust are fundamental components. It is constructed as a dummy variable that scores 1 if the countries included in the dyad share the same

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[317] The database is available online at http://www.cepii.fr. The distances are calculated following the great circle formula, which uses latitudes and longitudes of the most important cities/agglomerations (in terms of population).

official language and 0 otherwise. Data are from the CEPII database.

DURABILITY OF THE HOST COUNTRY REGIME (DURABIL) – This variable accounts for the stability of political institutions in the host country. Data are from the widely known Polity IV database, whose manual defines regime durability as the number of years since the most recent regime change, defined by a three-point change in the Polity score over a period of three years or less, with the end of transition period defined by the lack of stable political institutions. The first year during which a new polity is established is coded as the baseline "year zero" (value=0) and each subsequent year increases the value of the variable by one.[318] Stability of political institutions should have a positive effect on FDI since it represent a signal of a reliability.[319]

LEVEL OF DEMOCRACY OF THE HOST COUNTRY ($DEMO_j$) – This variable is a measure of the institutional democracy of the host country. In order to measure the level of democracy, I referred to the variable POLITY2 comprised in the Polity IV database, an eleven-point scale from -10 to 10 that I have transformed in a scale from 1 to 21 so as to have only positive values.[320] This measure of democracy is used in the existing IR studies of FDI' flows.[321]

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[318] See Marshall and Jaggers, 2005.
[319] See Li and Resnick, 2003.
[320] Polity IV measures the levels of democracy and autocracy present in nearly all countries of the world taking into consideration four institutional dimensions for the democracy index and five for the measure of autocracy. POLITY2 is the composite measure of democratic institutions obtained by the difference between the DEMOC and the AUTOC indexes for each country and treats the cases of "standardized authority codes" along the lines suggested by the Polity IV Manual. See Marshall and Jaggers, 2005, pp. 15-16.
[321] See Li and Resnick, 2003; Jensen, 2003.

JOINT DEMOCRACY (JOINTDEM) – I included this additional variable on democracy since this is the way the hypotheses on the relevance of democracy for economic interdependence are tested in the studies on bilateral trade flows.[322] From a theoretical point of view, while the "unilateral" variable is more focused on the internal features of the host country and on the eventual advantages firms could get investing in a democracy, the "bilateral" one is more security-related. It acknowledges the rationale as well as the empirical findings of the democratic peace theory and it takes into account the behaviors of democratic states, which could show a tendency to be more economically interdependent with other democracies than with autocracies. JOINDEM is constructed as a dummy variable that equals 1 when both the members of the dyad score at least 17 in the measure of unilateral democracy and 0 otherwise.

FOREIGN POLICY AFFINITY (AFFIN) – This variable has been constructed by Erik Gartzke as an index ranging from -1 to 1 with the aim of measuring the interest similarities among dyads of states. This measure stems from an analysis of the votes of all member states in the UN General Assembly and therefore it registers the behavior of states when they deal with a wide variety of different situations. A value of -1 means absolute dissimilarity of interests, while a value of 1 stands for a complete affinity between the two states considered.[323] I converted the data to have only positive values.

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[322] See Morrow, Siverson and Tabares, 1999; Mansfield, Milner and Rosendorff, 2000; Long, 2003.

[323] See Gartzke, Li and Boehmer, 2001. These data can be downloaded at: www.columbia.edu/~eg589/.

ALLIANCE BETWEEN THE HOST AND THE HOME COUNTRY (ALLNCE) – This is the typical security-oriented variable that addresses the relationships' level of the international system and that serves the purpose of trying to measure the weight of security logics on international interdependence.[324] ALLNCE is constructed as a dummy variable coded 1 if an alliance exists between the members of the dyad and 0 otherwise. Data on alliances are from the ATOP 3 database and since the last year considered by this database is 2003, I expanded the data on my own to 2004.[325]

DEFENSE PACT (DEFPACT) – This variable constitutes an important specification of the variable that detects alliances. DEFPACT is a dummy variable that scores 1 when the countries included in the dyad are members of the same alliance and such agreement obligates them to provide military support to the ally in case of attack by a third party. This type of alliance is the most demanding but also the most important one, since it highlights the tightest relations a state has with other members of the system. In some studies on international trade these alliances have been recognized as the ones that really have a significant impact on economic interdependence.[326] Data are from the ATOP 3 database.

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[324] The first empirical analysis of this kind is Gowa and Mansfield, 1993.

[325] The ATOP 3 database defines alliances as "written agreements, signed by official representatives of at least two independent states, that include promises to aid a partner in the event of military conflict, to remain neutral in the event of conflict, to refrain from military conflict with one another, or to consult/cooperate in the event of international crises that create a potential for military conflict". See Leeds, Ritter, Mitchell, and Long, 2002, p. 238.

[326] See Long, 2003.

NON-DEFENSE PACT (NONDEF) – This is a dummy variable that equals 1 when the states comprised in the dyad are members of the same alliance but this agreement is not a defense pact.

COLONIAL TIES (COLONY) – This dummy variable scores 1 if the countries included in the dyad shared a colonial relationship after 1945. Maintaining patronage relations with former colonies to create spheres of influence is a typical strategy in power competition and these ties can have a positive effect on FDI flows. The relevance of colonial ties has been evaluated in various studies on international trade and foreign aid.[327] Data are from the CEPII database.

WAR IN THE HOST COUNTRY (WAR) – This dummy variable is coded 1 when a war is fought on the territory of the host country.[328] I expect a negative impact of the presence of war on FDI. Data are from PRIO *Armed Conflict Dataset, Version 3-2005*.[329]

MILITARY EXPENDITURES OF THE HOST COUNTRY (MILEXP) – This variable represents the military expenses of the host country as a percentage of GDP. It can be considered and indicator of stability, both because it gives an idea of the economic outlook of governments and of the way public finances are managed, and because it sheds some light on the attitude of governments towards war, as a complement in the evaluation of such variable. Data are from the World Bank *Indicators*.

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327 See Mansfield and Bronson, 1997a; Alesina and Dollar, 2000.

328 See Mansfield and Bronson, 1997a; Mansfield, Milner and Rosendorff, 2000.

329 I did not include a bilateral variable indicating the presence of war between the members of the dyads because of the scarce number of observations in the period considered.

Summing up, the basic model I have synthetically presented above in form of equation is designed to test the relevance of several different variables, some of which are more related to economic determinants of FDI, while others descend from different political theories. According to my hypotheses, we should find a positive impact of the majority of economic variables, both those related to the host country and those that point at the size of the home economy, even though the effect of some of them is susceptible of being insignificant and with the exception of government expenditure, which should discourage FDI. As regards the legal framework of the host country, the barriers to capital flows are expected to exert a negative impact of FDI. Distance should be inversely related to FDI flows, while contiguity and the presence of a common cultural environment should favor them. For what concerns the influence of political variables, FDI are expected to be particularly developed among friend countries and meager among adversaries. Drawing on previous studies on international trade, security dynamics should have a greater effect than general affinity on global issues and democratic countries are supposed to be more interdependent with states that share the same political regime.

3.6 Methodological Note

The debate over the use of fixed-effects panel analysis in IR studies has put into evidence the importance of this method to take into account unobserved differences between dyads, while acknowledging data heterogeneity.[330] Nonetheless, fixed-effects models have also important shortcomings, due to the

[330] See Green, Kim and Yoon, 2001.

impossibility of estimating coefficients of time-invariant variables and to the problems in estimating rarely changing variables such as political regimes and patterns of alliances.[331] The method I have used in my research has been recently elaborated by Plumper and Troeger to overcome these problems of fixed-effects panels, when we have a particular theoretical interest in those kinds of variables.[332] This estimator is called "panel fixed-effects regression with vector decomposition" (FEVD) and it is a three-stage technique where the conventional cross-sectional fixed-effects are estimated in the first stage; the next stage involves decomposing these individual effects by partitioning them into separate (strongly or weakly) time-invariant and residual components; and the third stage reestimates the original model via pooled OLS containing both the time-invariant variables and the second-stage residuals noted above.[333] To avoid problems of inverse causality, I have lagged all independent variables. I have logged the dependent variable, MKTSIZE$_j$, MKTSIZE$_j$, DEVEL$_j$, GOVEXP$_j$, PROPERTY$_j$, NATRES$_j$, DIST, DURABIL, DEMO$_j$, MILEXP to avoid problems of skewed distribution and to better interpret the corresponding coefficients.[334] The temporal dynamics for the FEVD estimator are accounted for by a Prais-Winsten AR(1) serial correlation

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[331] See Beck and Katz, 2001.

[332] See Plumper and Troeger, 2007.

[333] The inclusion of the variables in the second stage of the "invariant variables" depends on the between to within variance ratio and on the correlation between the unit effects and the rarely changing variables. A large ratio suggests treating the variable as time-invariant.

[334] The introduction of the function log dropped a small number of negative values, due to movements of intra-company loans. For what concerns values of FDI stocks = 0, I assigned them the value of 100.000 US dollars, that in terms of FDI can be equated to zero.

correction and heteroskedasticity is taken into consideration through Huber-White standard errors. I computed the sample correlations (not repeated for the sake of saving space) between pairs of variables in order to check for possible collinearity which does not seem to be a concern here. The values go from 0.0009 to 0.8022, the latter coefficient reflecting the relationship between the two measures of democracy, which however have never been used together. The next largest value can be found in the relationship between $MKTSIZE_j$ and $DEVEL_j$, with a coefficient of about 0.6.

An issue that needs to be discussed is the possibility that the dependent variable and one or more regressors in the economic variables' group may be non stationary, i.e. integrated of order 1.[335] Availability of data aside, this would suggest an investigation of the possible presence of common stochastic trends,[336] i.e. the presence of cointegration.[337] In such a case, we would have to think of some long-run equilibrium relationship among the variables and of an error correction mechanism by which deviations from the long-run equilibrium affect the short term dynamics. I have chosen not to pursue this direction for several reasons: first, the very nature of the research question developed in this chapter points at a structural dependence of the behavior of the dependent variable upon political variables in a changing world. The structural break(s) which I suppose may have played a role would make the concept of long-run equilibrium difficult to interpret even if detected empirically. Second, the number of variables included in the analysis makes in very difficult to conduct a cointegration analysis in a full

[335] See Hamilton, 1994.
[336] See Stock and Watson, 1988.
[337] See Engle and Granger, 1987.

information framework. Third, the data availability does constitute a problem because it does not leave much room for detecting nonstationarity in a reliable way.

In this respect it seems reasonable to estimate the base model and its modifications accounting for autocorrelation, paying attention to the possibility of a high estimated autocorrelation coefficient and/or a very low Durbin-Watson statistics which could signal the presence of spurious relationships.[338]

Table 4: Effects of Economic and Political Variables on Bilateral FDI Outflows

Variables	**Model 1**	**Model 2**	**Model 3**	**Model 4**
$MKTSIZE_j$	.900***	.883***	.881***	.901***
	(.000)	(.000)	(.000)	(.000)
$MKTSIZE_i$	1.300***	1.276***	1.291***	1.300***
	(.000)	(.000)	(.000)	(.000)
$DEVEL_j$	.107***	.102***	.137***	.105***
	(.000)	(.000)	(.000)	(.000)
$DEVEL_i$	1.747***	1.759***	1.732***	1.748***
	(.001)	(.001)	(.001)	(.001)
$GOVEXP_j$	-.132***	-.127***	-.136***	-.136***
	(.038)	(.039)	(.042)	(.039)
$CAPRESTR_j$	-.148***	-.145***	-.153***	-.147***
	(.006)	(.006)	(.007)	(.006)
$NATRES_j$	.262***	.260***	.256***	.262***
	(.000)	(.000)	(.000)	(.000)
DIST	-.639***	-.628***	-.644***	-.639***
	(.000)	(.000)	(.000)	(.000)
COMMLANG	1.659***	1.656***	1.576***	1.661***
	(.001)	(.001)	(.001)	(.001)
DURABIL	.075***	.072***	.084***	.074***
	(.005)	(.005)	(.006)	(.005)

338 See Granger and Newbold, 1974.

JOINTDEM	.246***	.241***	.253***	.247***
	(.011)	(.011)	(.013)	(.011)
ALLNCE	.228***		.248***	.230***
	(.010)		(.011)	(.010)
DEFPACT		.586***		
		(.000)		
NONDEF		.132***		
		(.006)		
COLONY			.494***	
			(.002)	
WAR				-.068***
				(.004)
Constant	-53.213***	-52.342***	-52.607***	-53.194***
	(.016)	(.016)	(.014)	(.016)
Observations	10733	10733	10463	10733
Period	1981-2004	1981-2004	1981-2004	1981-2004
adj. R^2	.901	.902	.901	.901
Rho	.843	.843	.842	.842
D-W statistic	1.089	1.090	1.091	1.089

Note: Huber-White robust standard errors in parentheses. * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

Table 5: Effects of Economic and Political Variables on Bilateral FDI Outflows

Variables	**Model 5**	**Model 6**	**Model 7**	**Model 8**
$MKTSIZE_j$	.907***	.878***	.870***	.891***
	(.000)	(.000)	(.000)	(.000)
$MKTSIZE_i$	1.324***	1.320***	1.209***	1.296***
	(.000)	(.000)	(.000)	(.000)
$DEVEL_j$	.133***	.214***	.174***	.107***
	(.001)	(.001)	(.000)	(.000)
$DEVEL_i$	1.863***	1.851***	2.722***	1.760***
	(.003)	(.002)	(.001)	(.001)

$GOVEXP_j$	-.157***	-.124***	-.102**	-.126***
	(.042)	(.046)	(.044)	(.038)
$CAPRESTR_j$	-.164***	-.106***	-.144***	-.146***
	(.010)	(.010)	(.007)	(.006)
$NATRES_j$	.272***	.228***	.160***	.257***
	(.000)	(.000)	(.000)	(.000)
DIST	-.783***	-.627***	-.670***	-.556***
	(.000)	(.000)	(.000)	(.000)
COMMLANG	1.840***	1.461***	1.508***	1.521***
	(.001)	(.001)	(.001)	(.001)
DURABIL	.080***	.055***	.059***	.078***
	(.004)	(.005)	(.006)	(.005)
JOINTDEM	.196***		.166***	.239***
	(.006)		(.015)	(.011)
ALLNCE	.204***	.206***	.112***	.246***
	(.011)	(.017)	(.012)	(.010)
AFFIN	.029			
	(.062)			
$DEMO_j$		.222***		
		(.020)		
$PROPERTY_j$		.002		
		(.044)		
MILEXP			-.141***	
			(.000)	
CONTIG				.927***
				(.001)
Constant	-54.235***	-55.628***	-59.659***	-53.736***
	(.038)	(.019)	(.020)	(.016)
Observations	9822	9485	8542	10733
Period	1981-2004	1981-2004	1981-2004	1981-2004
adj. R^2	.903	.913	.923	.901
Rho	.835	.841	.800	.843
D-W statistic	1.091	1.038	1.077	1.090

Note: Huber-White robust standard errors in parentheses. * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

3.7 Results

The results of the econometric estimates (Tables 1, 2) confirm the idea we started from, namely that there is no simple and linear relationship between international politics and economic interdependence among states, but rather that the two spheres are connected by complex relationships. As regards the economic variables, all of them approximately seem to exert the influence we expected. The size of both the host and home countries appears to exert positive strong effects on FDI flows, with different degrees. From a direct comparison, the economic size and the level of development of the home country seem to be more relevant than the economic measures of the host. This outcome could be probably due to the fact that we are analyzing outflows, so that a large and developed home economy is certainly an important factor to produce massive flows of investments. Previous IR studies on FDI have a unilateral structure and take into consideration inflows, so that they cannot check for this effect. As expected and already demonstrated in previous studies, high amounts of public expenditure discourage FDI exerting a negative and significant influence. Natural resources, instead, show always significant and positive coefficients, confirming the hypothesis that they represent a relevant factor to invest abroad, especially in some industrial sectors.

As regards the legal framework of the host country, capital account restrictions are found to be effective instruments to limit and direct FDI flows, since their presence wields a statistically significant and negative effect on investment flows in all models.[339]

Similarly to what happens in the studies dealing with international trade and in the ones on FDI that I mentioned, the geographical variables are statistically significant in all models and appear to have notable effects in accordance with what we expected. Even though current transportation costs are lower and communication is easier, distance has nonetheless a remarkably negative effect on FDI, so that investing in a contiguous country is certainly an important opportunity for firms, other things being equal (see Model 8). A further element in favor of short distance may be cultural contiguity, which implies better ways to gather information and have a deep understanding of the environment.

Sharing the same language with the home country seems to be very important in order to attract international investments, but this variable probably hides something more. First of all, the language variable is just an indicator for the weight of cultural factors, which can act well beyond the level of simple everyday communication. Sharing the same cultural roots can have repercussions on the decisions of firms for at least two additional reasons: on the one hand, organization of work and production processes are influenced by culture, so that it could be better to engage in complex productive investments in countries where perspective workers can easily get used to the firm's practices and business management. On the other hand, also tastes of consumers and consequently the demand curve of

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[339] From a policy point of view, it could be interesting to prepare further analyses trying to introduce the new indicators that the IMF has created in the last years into the models, given that these new measures specify the instruments used by the states much more accurately than the one I used here.

the market are influenced by culture: similarity in background culture can make it easier to intercept foreign customers' preferences. From the states' point of view, instead, sharing the same language could mean sharing past colonial relations and current special political interests, likely to generate a tendency to promote good economic relations with such partners.

This line of thoughts matches with the results of the variable that records the existence of colonial ties between the members of the dyads after 1945. In accordance with my hypothesis, past colonial relations, that could seem a hulk of ancient power politics, turn out to exert notable influence even on recent and contemporary economic interdependence. Especially in systems marked by harsh competition for power, states have incentives to create patronage relations and spheres of influence, favoring economic relations with the countries involved. This rationale is similar to the one at work within alliances (and that does not exclude the eventual overlapping of alliance pacts), even though in patronage relations a degree of hierarchy persists, where the lesser state is usually more dependent on the stronger one than vice versa.[340] These peculiar relationships oscillate between the area of political obligation and the one of "contract-exchange", being often closer to the former pole of stylized relations. They had already been noticed by Aron, who underlined the race among donors to increase the number of their *protégés*.[341] States aim at increasing the stability

[340] For a study on anarchy and hierarchy in international relations see Lake, 1996.

[341] See Parsi, 1998; Aron, 1962, p.506: "For the first time in history, helping the weak is meant to be consistent with the interest of the strong. […]For the first time in history, donors show the fear of their rivals who prove to be more

and usefulness of these relationships attempting to manage different economic instruments: from foreign aid, which is clearly the easiest and most directly manageable, to international trade and FDI.[342] On their side, firms are interested in directing their investments towards countries that entertain good political relationships with their home governments, and major flows of foreign aid and trade seem to be enough solid bases for weak states to maintain good political relationships with their patrons.

Concerning the other political variables, from the base model (Model 1) to the following specifications, it is easy to notice how the complex knot of interdependence acknowledges both "realist" and "liberal" logics, applied by firms and states in their quest for secure investments. The variable JOINTDEM is highly significant in all models that comprise it and it has constantly a value around 0.20, which means an approximate increase in FDI of 20%. This outcome confirms the hypotheses discussed above of a relevant and positive effect of democracy on the expansion of international investments, according to which democracy has the power to favor FDI flows for various and concurring reasons. The results of the bilateral variable

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generous than they are. Though, the nature of men and states has not changed." [*My translation*].

[342] For the positive influence of colonial ties on foreign aid, see Alesina and Dollar, 2000. For the positive effect of past colonial relationships on bilateral trade, see Mansfield and Bronson, 1997a; Mansfield, Milner and Rosendorff, 2000. Alesina and Dollar claim that colonial ties are irrelevant for FDI, even though they use a less stringent measure of colony than mine, taking into consideration colonial ties from 1900. Probably this difference is due to the different number of observations: they analyze 361 observations in 25 years (1970-95) while I consider 10463 observations from 1980 to 2004. COLONY produced significant and positive coefficients in all the models where I included it, even though not reported here for reasons of parsimony. See also Collier and Dollar, 1999, finding a positive effect of foreign aid on FDI.

supports the arguments dealing with the posture of states towards their counterparts and with the different approach democracies seem to have towards each other, as explained by the democratic peace theory.[343] Using the unilateral variable has not much sense *per se* in this case, given that all the home countries considered are consolidated democracies, but I used this strategy in some models (see Model 6) to investigate the relative strength of the hypotheses on the internal features of democracies. As suggested above, the Tsebelis-like logic pointing at the stability and predictability of public policies and focused on the life of democratic institutions seems to be stronger than the hypothesis highlighting the protection of property rights, since this latter variable fails to result statistically significant in my investigations.[344] To conclude on the issue of internal regimes, including natural resources in the analysis appears to be important not only for their economic meaning, but also because it seems to exist a positive correlation between natural resources-dependent economies and authoritarian regimes. If there is a positive correlation between authoritarian states and natural resources and a positive correlation between these resources and FDI, there is a risk of confusing the determinants of FDI, underestimating the role of democracy.[345]

If FDI flows seem to be influenced by relational factors and the state of affairs among states, we must notice that the

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[343] The classical reference to the article that inaugurated contemporary research on the democratic peace is Doyle, 1983.
[344] My study is supported by a remarkable number of observations, but it is not simply and immediately comparable to the one by Li and Resnick. The relation between globalization and the internal mechanisms of democracy surely deserves additional empirical analysis.
[345] See Jensen, 2003.

variable constructed using the votes of states at the UN General Assembly turns out to be always insignificant in the models where it is taken into consideration.[346] On the one hand, this seems to contradict what just claimed on the relational dynamics influencing international investments, but on the other hand it is right to recall that such variable is found to have no significant effect also in studies on international trade.[347] My tentative explanation of this phenomenon consists in assuming that this variable is constructed taking into account too many issues influencing the general state of affairs among states. In the context of the General Assembly, states vote on an extremely wide number of completely different issues and most of the times their votes have a symbolic value. Thus this variable is correctly constructed to give an overall idea of the general preferences of states on global politics and of the compatibility of such preferences, but in order to see any effect of international politics on economic interdependence we need more specific variables.

The issues eventually taken into consideration by states in order to shape their economic interdependence towards other states and by firms to perceive the stability and quality of relationships among countries have more to do with international security, so that facing the same threat will probably have more relevance than taking contrasting positions on the death penalty. Just like international trade, FDI flows promote growth and efficiency, but they need an even longer time horizon and probably transfer more knowledge: for this reason they need more solid reassurances than general

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[346] I used both the variable including abstentions at the UNGA and the one excluding them.

[347] See Long, 2003.

concordance. It is taking into account harsh questions and (even improbable, depending on the overall tension present in the international system) situations that states and firms may decide to give a determinate shape to interdependence.

The presence of an alliance between the members of a dyad seems to be a definitely more solid base, so that ALLNCE is significant and strongly positive, as expected in the hypotheses and in accordance with the studies on international trade. Reinforcing the argument about the need for solid reassurances in the quest for security, Model 2 shows that defense pacts have a strikingly positive effect on FDI flows, nearly twice the effect of standard alliances, while non-defense pacts, which do not imply a commitment to the direct use of force in case of external attack, exercise a far less relevant, though still positive, influence on economic interdependence.

To conclude on the political variables, in Model 4 WAR shows a significant and negative effect on FDI, as it was largely expected. Nonetheless, it does not seem to have really disruptive consequences, as the corollaries of war could make one think. The reason for this outcome could reside in the predictive skills of investors: if foreign firms are so concerned about making secure investments, they have to be careful and keep away from unstable contexts with high probabilities to degenerate into wars.[348] If foreign investors have good predictive skills, they derive their expectations on the danger of certain contexts from other variables, and this idea is supported by the fact that in Model 7 MILEXP is found to reduce FDI flows far more than WAR. Such variable can be considered an indicator of the situation at stake in a particular context, not only in the sense

[348] See Li, 2006b.

that states that spend more in arms demonstrate a greater disposition to go to war, but rather since it is an index of general instability, for instance concerning the management of public finances by governments.

Table 6: Effects of Economic and Political Variables on FDI (Cold War System)

Variables	**Model 1 Bipolar**	**Model 2 Bipolar**	**Model 3 Bipolar**
$MKTSIZE_j$	.769***	.744***	.708***
	(.002)	(.002)	(.003)
$MKTSIZE_i$	1.314***	1.273***	1.304***
	(.001)	(.001)	(.001)
$DEVEL_j$	.222***	.216***	.195***
	(.006)	(.006)	(.006)
$DEVEL_i$	1.406 ***	1.442***	1.384***
	(.452)	(.451)	(.469)
$GOVEXP_j$	-.321***	-.280***	-.193***
	(.021)	(.022)	(.021)
$CAPRESTR_j$	-1.23***	-1.18***	-1.30***
	(.003)	(.004)	(.005)
$NATRES_j$	.548***	.537***	.522***
	(.009)	(.009)	(.009)
DIST	-.831***	-.853***	-.842***
	(.000)	(.000)	(.000)
COMMLANG	1.503***	1.473***	1.383***
	(.001)	(.001)	(.001)
DURABIL	.028	.061	.115**
	(.041)	(.040)	(.052)
JOINTDEM	-.262***	-.278***	-.279***
	(.086)	(.086)	(.081)
ALLNCE	.234***		.328***
	(.002)		(.003)
DEFPACT		.434***	
		(.001)	

NONDEF		-.260*** (.006)	
COLONY			.720*** (.002)
Constant	- 44.184*** (.032)	-42.754*** (.023)	-42.447*** (.046)
Observations	1255	1255	1244
Period	1981-1991	1981-1991	1981-1991
adj. R^2	.929	.930	.928
Rho	.733	.730	.734
D-W statistic	.956	.948	.970

Note: Huber-White robust standard errors in parentheses. * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

Table 7: Effects of Economic and Political Variables on FDI (Post-Cold War System)

Variables	**Model 1 Post-Bipolar**	**Model 2 Post-Bipolar**	**Model 3 Post-Bipolar**
$MKTSIZE_j$	.856*** (.004)	.864*** (.004)	.837*** (.005)
$MKTSIZE_i$	1.411*** (.000)	1.419*** (.000)	1.406*** (.000)
$DEVEL_j$	.080*** (.006)	.077*** (.006)	.107*** (.006)
$DEVEL_i$	1.287** (.624)	1.282** (.624)	1.294** (.644)
$GOVEXP_j$	-.137 (.155)	-.146 (.155)	-.163 (.160)
$CAPRESTR_j$	-.148** (.054)	-.146** (.054)	-.155** (.056)
$NATRES_j$	.119*** (.000)	.122*** (.000)	.111*** (.000)

DIST	-.510***	-.504***	-.516***
	(.000)	(.000)	(.006)
COMMLANG	1.563***	1.560***	1.527***
	(.003)	(.003)	(.003)
DURABIL	.039	.038	.043
	(.077)	(.077)	(.077)
JOINTDEM	.267***	.266***	.259***
	(.083)	(.082)	(.083)
ALLNCE	.891***		.914***
	(.003)		(.003)
DEFPACT		.815***	
		(.001)	
NONDEF		.964***	
		(.006)	
COLONY			.065***
			(.003)
Constant	-51.353***	-51.745***	-50.975***
	(.058)	(.073)	(.064)
Observations	6799	6799	6625
Period	1992-2004	1992-2004	1992-2004
adj. R^2	.949	.949	.948
Rho	.721	.721	.721
D-W statistic	1.020	1.021	1.019

Note: Huber-White robust standard errors in parentheses. * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

3.7.1 The Influence of Polarity

Table 3 synthetically describes the influence of polarity on FDI flows and even from this concise picture it is easy to see that the systemic level has a great influence on international investments, strongly modifying the action of the most important variables.[349] Before focusing on the political aspects, it is interesting to see how the expansion of globalization, with its multiple implications, has changed the impact of natural resources, distance, and capital restrictions. Even though still relevant, the positive effect of natural resources is clearly weaker in the post-bipolar age, testifying a remarkable change in the structure of international production and in the priorities of MNEs. The importance of this change is supported by the reduced negative effect of distance, which has still noteworthy influence, but almost 30% less than it used to have during the Cold War. This is due to the increased facility of transports and communication allowed both by new technologies and less political constraints. Even in the case of capital restrictions, things have dramatically changed as an additional consequence of new technologies: if such measures still reduce the mobility of FDI flows, they are in fact far less effective than they used to be before the 1990s.

For what concerns strictly political variables, the two scenarios seem to belong to different worlds. The analysis of the bipolar period shows that it was the realm of realist theories, although these results should be taken with a little caution, considering the reduction in the number of observations. In an international economic system which was not yet open to the logic of globalization and with heavy limitations to capital flows imposed by governments, FDI used to reach modest amounts if compared to the following period and the harsh competition between the two blocs forced states and firms to focus strictly on security issues. In such a system, democracy is not enough

[349] The Chow test is significant at 1% level, thus confirming the presence of a strong structural break.

reassuring and interesting for MNEs, appearing to exert even a negative effect, while alliances and especially defense pacts, dealing directly with security issues, assure much more sound bases to engage in long-term investments abroad. In addition, past colonial ties reveal their connection with power competition and the construction of spheres of influence through the creation and the maintenance of patronage relationships, which result to be considered trustworthy enough to attract FDI. Non-defense pacts, instead, seem to be so little reassuring that they exert a negative effect on FDI. This result is rather puzzling, given that although of a "lighter" form, non-defense pacts are nonetheless alliances. However, in a context of heavy security concerns, they could hide something not totally convincing behind their facades. Non-defense pacts include non-aggression pacts and not infrequently along history agreements of this kind have been signed by states without the promise of reciprocal military support exactly because the parties were afraid of each other's intentions.[350] In synthesis, non-defense pacts could express more a will of reciprocal control than real cooperation in security issues. We can evaluate this possibility even thinking about the cases of non-defense pacts included in the database. A significant portion of such cases is composed by dyads of members of the former CSCE (now OSCE), that used to comprise also the USA and the USSR and that can hardly be defined an alliance in the classical sense. Rather, it is probably better conceptualized as an instrument of reciprocal control.

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[350] These dynamics were already at work in the ancient Greece, where the *poleis* used to stipulate different forms of pacts and alliances with different underlying logics, in an international system dominated by anarchy. See Kagan, 2003.

The picture of the post-bipolar system is completely different: in the globalized productive system FDI represent the symbol of contemporary economy and have become almost inevitable.[351] In a context where the competition for power among states is far more relaxed than in the bipolar one and the risk of world wars is a far shadow, FDI proliferate following prevalently economic rationales, with more attention to the internal situation of states and with a reduced need for reassurances. In this context marked by generalized higher propensity to make direct investments abroad, both democracy and the various types of alliances are able to guarantee sufficiently solid bases for FDI, even though at different degrees. The major difference with the bipolar system is represented by the coefficient of JOINTDEM, which shifts from a negative to a positive value. In the realist security-focused context of the Cold War, democracy was not reassuring enough and it was considered more a burden than an asset for a host country. In the post-bipolar international system, instead, major wars among states have become unlikely, the main sources of instability often originate within the boundaries of states and the cultural environment of many ruling elites has changed, so that the stability and transparency brought by democracy have acquired notable value. As regards alliance pacts, they already exerted positive effects during the Cold War and in the post-bipolar system their effects are multiplied by the reduced security tensions and the higher propensity towards international investments. Both simple alliances and defense pacts show much higher coefficients, but the coefficient of non-defense pacts undergoes a really dramatic change, shifting from a negative to a strongly positive value. This outcome can be explained by two

[351] See Rosecrance and Thompson, 2003.

concurring circumstances: on the one hand, when classical security issues are not so stringent, the specific features of alliance pacts somewhat lose their importance. On the other hand, non-defense pacts are less security-centered even because a certain share of these treaties includes parts dealing with cooperation on economic issues, which are not sufficiently reliable in times of harsh tension, but become relevant when decisions are made following more linear economic rationales. In the end, old colonial ties still exert a positive effect, but they have lost almost all their strength, since states are less interested in maintaining costly spheres of influence and foreign aid is increasingly allocated by international agencies through efficient economic criteria.

3.8 Conclusions

This study seems to confirm once again that a relationship exists between international politics and international economic dynamics, but it also confirms that this relation is quite complex. Given the complexity of such a relationship, this chapter supports the necessity to engage in additional efforts to expand our idea of economic interdependence beyond the borders of international trade and to take into consideration the movements of international capital, that represent an increasingly important part of contemporary world economy. It seems possible to sketch some first results from the analysis of bilateral FDI claiming that even though this form of economic flow has acquired a massive dimension quite recently and it did not get through the classical age of power politics like trade did, it does not seem nonetheless immune to the influence of international security dynamics. However, these dynamics do not appear to exert their effects only and simply through the lines suggested by the mainstream version of realism. The first results support the theory according to which democracies have peculiar characteristics favoring economic interdependence and tend to develop better relations among them than with other states, thus confirming the complexity and the multifaceted character of contemporary international politics. As regards the influence of polarity, the system level appears to have important consequences on international investments. In a bipolar system where the competition for power between the two blocs pervades all issues, FDI are scarce and follow strict security lines. In a more open system where the need for reassurances is less stringent, instead, international production proliferates, the rationales mix and liberal theories of international politics gain a greater explanatory power.

CONCLUSIONS

Drawing some conclusions from the research that produced this dissertation, I cannot avoid recalling the two sentences by Susan Strange and Erik Gartzke that I quoted in the introduction, since all this dissertation is a constant reaffirmation of their truth. For what concerns Strange's sentence, according to which politics and economics are not separated spheres of reality, but rather contiguous fields without a clear dividing line, it seems to remain true even if we change the dependent variable as well as the time period of our empirical studies. If politics and economics can prove to be quite separated at the micro level, at least in some contexts where explicit and implicit rules effectively ratify such division, at the macro level they are tightly interconnected, even though the connections under scrutiny can vary from time to time and operate in accordance with different logics. Gartzke's sentence, in turn, is particularly telling because international politics and international economics are not linked in the rather simple and unilateral ways assumed by the classical traditions of thought, but in much more complex ways. Given that empirical findings induce us to acknowledge such complexity, it is probably better to move away from the tendency to keep on framing the debate over interdependence in terms of the paradigmatic clash between liberalism and realism.

While the “paradigm wars” probably contributed to the growing interest in the question of the relationship between political variables and economic interdependence, it has become more and more clear that neither liberal nor realist theories by themselves can provide a satisfactory analysis of this relationship. In fact, scholars have increasingly begun to recognize the limitations of traditional liberal and realist paradigms for the analysis of the relationship between political variables and economic interdependence.[352]

Especially in the last decades, economic interdependence has become a multilevel phenomenon, in which different actors play a significant role and different logics are applied contemporaneously. For what concerns the relevant actors, the realist tradition has always assumed that states are the most important, if not the only important actors of international politics since the formation of the modern international system. The various versions of the liberal theory of international politics have instead supported a more pluralist approach, attaching an important role not only to states, but also to private actors and international organizations. Empirical literature has highlighted that both realist and liberal assumptions about the relevant actors in this field help explaining part of reality, but also that the real picture is much more complex and none of the logics fostered by these theoretical traditions can be excluded, especially in the contemporary system. When economic interdependence is at stake, private actors play a significant role producing remarkable commercial and financial flows even in contrast with the will of states. Besides, at the supranational level, international organizations seem to be effective

[352] See Levy, 2003.

mechanisms for the reduction of transaction costs and reliable frameworks to ensure a sufficient degree of control over the future behavior of states. However, the strength of these liberal predictions depends on the context that is taken into consideration. On the one hand, the results of the study on trade clearly show that not all international organizations work in the same way, since their effectiveness depends on their concrete features as well as on the strength of the political will that the founding members exerted at the beginning of their institutional history. These two variables account for the different results achieved by the EC/EU, the GATT/WTO and simple preferential trade agreements. On the other hand, the range of action that these actors have at their disposal changes with the polar configuration of the system and the degree of security and political tension that is present in the system at a given moment in time. In the post-bipolar system non-state actors seem to move more freely than they were allowed to do during the Cold War.

Nonetheless, realist hypotheses according to which states are central actors also in the field of economic interdependence are certainly confirmed. The variables that are tightly connected to the logics of national security and the construction of spheres of influence produce significant results in all empirical studies included in this dissertation, and the signs of their coefficients are always in accordance with the hypotheses of the realist theory. However, the situational context of interaction exerts its weight also on states and their relevance, as well as their freedom of action, varies with the changes undergone by the whole international system. States did not renounce to their role and they have not been defeated by the forces of world markets as some had prefigured in the early nineties, when the discipline began to discuss about globalization. Yet their effectiveness in managing the flows that constitute the sources of economic interdependence has definitely diminished, as it can be noticed from the results of the study on bilateral FDI.

For what concerns the form and role of the state in the present international system, the empirical results suggest that the classical Westphalian sovereignty has been weakened in the last two decades, but globalization has not lead to the demise of the state. Globalization is not dissolving the state, but it has not left it untouched either. The long era of global struggle, starting with World War II and continuing with the Cold War was a major factor in strengthening and centralizing national governments.[353] This era has then come to an end and the state's capacity has been weakened, including that of the most powerful state, the United States.[354] Paradoxically, the Cold War both stimulated globalization and, at the same time, rescued the nation-state invigorating its economic and social functions; however, the end of the Cold War has left the state weakened and exposed to the globalizing forces that the Cold War had initially encouraged but which persisted after its end. Such weakening forces notwithstanding, it appears hyperbolic to think that a real collapse of the state is going on. Globalization is not a wholly autonomous force and has historically been shaped, encouraged and thwarted by wider currents of international relations.[355] It has also, fundamentally, been mediated through the activities of states. States still enjoy structural powers from their economic activities and, in turn if less visibly, continue to provide the framework within which the globalized economy

353 See Ikenberry, 1995.
354 See Deudney and Ikenberry, 1994; Gilpin, 2001.
355 See Clark, 1997.

functions: to that extent, globalization has a persisting need for viable states and its own stake in their survival.[356]

Summing up, the state has proved to be a highly adaptable institution and it does not seem to be on its sunset boulevard. For sure, its power, its role and its range of action are changing,[357] but it is still a central actor of international relations, even in the economic sphere. In addition, it is also due to notice that not all states face the consequences of growing economic integration in the same way, since they occupy different positions in the international system. On the one hand, globalization does not involve all states in the same way and states that are less integrated in the world economy seem far from retreating. They keep the prerogatives we were used to consider typical of states during the XX century to a higher degree that the more globalized states do.[358] On the other hand, the behavior of the great powers seems to match with the realist predictions quite carefully, even in the age of globalization and even though the majority of them is composed of highly globalized states. Because of their particular position in the system, those states are more exposed to political tensions and security crises than lesser states are, and for this reason they display a rather security-oriented approach to economic interdependence, privileging realist logics to liberal ones.

If the picture is complex for what concerns the relevant actors, it is not simpler as for the logics and the variables that should stimulate a higher degree of interdependence. As I have

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[356] See ibid.

[357] Clark elaborated the notion of "globalized state" to describe the form acquired by the states which are more involved in the dynamics of globalization. See Clark, 2001.

[358] See Gilpin, 2001.

recalled, realism bases its reasoning on the security externalities of international trade and it assumes that interdependence between states will be generally low. However, in case the two states are allied or they embody the patron and the *protégé* within the same sphere of influence, cooperating in economic matters can be a wise strategy since gains from trade increase the total power of the alliance or the hegemonic ties between the states. Liberalism, on the contrary, assumes that states will seek a high level of interdependence and that democracy and international organizations will prove to be effective facilitators of economic flows between states. As I have showed in the empirical chapters, both realist and liberal logics seem to work, partly as a result of the multiple actors that play a role in the international economy, partly because of the process of change that has characterized the international system during the last decades.

The complexity of the situation suggests that contemporary international political economy has to be studied in detail. Nonetheless, the key to interpret these results is that both states and private entrepreneurs facing international economic flows seek profit as well as security. In their quest for security, they look for signals of safe contexts within which they can situate international economic flows of various kinds. While in the past the realist logics were the most effective and to a certain extent the only available ways to achieve security, recently other logics have increased their relevance in contemporary international politics. The liberal hypotheses and especially the empirical effectiveness of the democratic peace seem to have acquired a high degree of credibility, so that now decision makers can base their decisions on an alternative logic, which sometimes overlaps the realist one while in other occasions it leads to different conclusions. Against this general background, the systemic change that took place with the end of the Cold War has not ruled out the importance of any logic, with the exception of the diminished relevance of past colonial relations. The remaining realist and liberal variables continue to exert their effects and in certain cases they have even larger impacts on the magnitude of economic flows, reinforcing the logic of multiple signals and increasing the complexity of the system as a whole. In other words, when the political tension at the systemic level decreases and the forces of globalization tend to increase the international commercial and financial flows, both the more pessimistic, security-oriented logics and the more optimistic ones seem to provide reliable signals for secure economic relationships.

However, even if the general mood in the system of states seems to be quite relaxed, and the most pressing security challenges seem to be caused by non-state actors or global phenomena, the great powers look as if they were not completely satisfied with optimistic logics and new reassuring signals. As we have noticed in the chapter on international trade, when the great powers have to manage economic relationships among themselves they still prefer to rely on the old security-oriented realist logics.

Such a behavior is also connected to the small contribution this dissertation can bring to the debate over the fundamental features of the contemporary international system and its polar configuration. As far as we can infer with a bit of inductive method from the results of the empirical analyses I performed, it does not seem that the present international system can be conceived as a unipolar system. In the same way, it does not seem a system where all security concerns among states have been deleted by globalization and by new forms of security challenges. On the contrary, the present system seems to share some features with a multipolar system, though incomplete. Probably we could assume that the present international system represents a transition phase, but we know that predicting the rise and the decline of the great powers without having a precise idea about the future role of fundamental variables such as technological development is a very risky business. What we can say at the present stage is that if the system is moving towards a multipolar configuration, history teaches that the future could be quite gloomy in terms of probability of major armed conflicts. Nonetheless, a global multipolar system in the XXI century would be characterized by a high and increasing number of democracies, a high number of international organizations and a high degree of economic and technological integration. These features do not have direct correspondence in the classical multipolar system, even though such system was characterized by a remarkable degree of economic integration. According to the empirical analyses all these features exert pacific effects on the relationships among states. We could say that having an optimistic or a pessimistic attitude towards the future basically depends on the attitude we have towards the results of the empirical literature in the field of international relations.

APPENDIX

Table 8: Variables included in Chapter 2 (Descriptive Statistics)

Variables	**Observations**	**Mean**	**Std. Dev.**	**Min.**	**Max.**
DEPENDENT	198511	15.11	3.407	.370	26.330
$ECOSIZE_i$	205218	24.379	2.137	16.663	29.997
$ECOSIZE_j$	198686	23.472	2.447	16.663	29.997
$POPUL_i$	206223	16.389	1.763	10.614	20.993
$POPUL_j$	203571	15.492	1.927	10.599	20.993
DIST	237276	8.567	.869	1.819	9.894
COMMLANG	237276	.155	.362	0	1
JOINTDEM	237610	.508	.499	0	1
ALLNCE	237610	.159	.366	0	1
DEFPACT	237610	.082	.275	0	1
NONDEF	237610	.077	.267	0	1
COLONY	237610	.012	.111	0	1
WAR	191663	.001	.025	0	1
AFFIN	162906	2.289	.263	1	2.602
WTO	237610	.631	.482	0	1
EU	237602	.017	.130	0	1
PTA	237610	.065	.247	0	1

Table 9: Variables Included in Chapter 3 (Descriptive Statistics)

Variables	**Observations**	**Mean**	**Std. Dev.**	**Min.**	**Max.**
DEPENDENT	28060	16.166	4.111	10.126	26.308
MKTSIZE J	128154	22.833	2.410	16.839	30.091
MKTSIZE I	144818	25.936	1.614	21.725	30.091
DEVEL J	115413	8.261	1.134	5.828	11.115
DEVEL I	143582	9.669	.527	7.827	11.115
GOVEXP J	116219	2.728	.437	.318	4.333
CAPRESTR J	125364	.690	.462	0	1
NATRES J	81561	2.687	1.339	-3.442	4.838
DIST	142560	8.600	.895	2.951	9.884
COMMLANG	142560	.102	.302	0	1
DURABIL	99541	2.648	1.201	0	5.273
JOINTDEM	95756	.408	.491	0	1
ALLNCE	153263	.158	.365	0	1
DEFPACT	153263	.059	.236	0	1
NONDEF	153263	.099	.299	0	1
COLONY	138960	.018	.136	0	1
WAR	120497	.073	.261	0	1
AFFIN	102188	2.213	.273	1	2.655
DEMO J	109740	2.206	.849	0	3.044
PROPERTY J	58683	3.396	.435	.693	4.094
MILEXP	67146	.797	.811	-2.488	6.699
CONTIG	142560	.017	.129	0	1

REFERENCES

Achen, Christopher H. 2000. Why Lagged Dependent Variables Can Suppress the Explanatory Power of Other Independent Variables. Paper presented at the *Annual Congress of the Political Methodology Section of the American Political Science Association*. UCLA, Los Angeles.

Adler, Emanuel and Michael Barnett (eds.) 1998. *Security Communities*. Cambridge: Cambridge University Press.

Aggarwal, Vinod K. and Koo, Min Gyo. 2006. Institutional Pathways to Security and Economic Cooperation in Northeast Asia. Paper presented at the *Annual Congress of the International Studies Association*. San Diego, CA.

Alesina, Alberto and David Dollar. 2000. Who Gives Foreign Aid to Whom and Why. *Journal of Economic Growth* 5 (1):33-63.

Anderson, James. 1979. A Theoretical Foundation for the Gravity Equation. *American Economic Review* 69 (1):106-16.

Anderton, Charles H. and John R. Carter. 2001. The Impact of War on Trade: An Interrupted Times-Series Study. *Journal of Peace Research* 38 (4):445-57.

Andreatta, Filippo. 2001. *Mercanti e guerrieri*. Bologna: Il Mulino.

Angell, Norman. 1911. *The Great Illusion*. New York: Putnam's.

Aron, Raymond. 2004. *Paix et guerre entre les nations*. Paris: Calmann-Lévy.

Azar, Edward. 1980. The Conflict and Peace Data Bank (COPDAB) Project. *Journal of Conflict Resolution* 24 (1):143-52.

Baldwin, David A. 1980. Interdependence and Power: A Conceptual Analysis. *International Organization* 34 (4):471-506.

Barbieri, Katherine. 1996. Economic Interdependence: A Path to Peace or a Source of Interstate Conflict? *Journal of Peace Research* 33 (1):29-49.

Barbieri, Katherine and Levy, Jack S. 1999. Sleeping with the Enemy: The Impact of War on Trade. *Journal of Peace Research* 36 (4):463-79.

Barbieri, Katherine and Gerald Schneider. 1999. Globalization and Peace: Assessing New Directions in the Study of Trade and Conflict. *Journal of Peace Research* 36 (4):387-404.

Baroncelli, Eugenia. 2003. Democrazia e commercio: il caso delle grandi potenze tra il 1980 e il 1998. *Rivista Italiana di Scienza Politica* 33 (1):31-69.

Baroncelli, Eugenia. 2005. On the political determinants of trade: conflict and regional integration in the case of Pakistan-India trade: an inquiry into the economic gains and the "peace dividend" from SAFTA. Paper presented at the *Annual Congress of the Italian Society of Political Science*. Cagliari.

Bearce, David H. 2003. Grasping the Commercial Institutional Peace. *International Studies Quarterly* 47 (3):347-70.

Beck, Nathaniel, Jonathan N. Katz, and Richard Tucker. 1998. Taking Time Seriously: Time-Series-Cross-Section Analysis with a Binary Dependent Variable. *American Journal of Political Science* 42 (4):1260-88.

Beck, Nathaniel and Jonathan N. Katz. 1995. What to do (and not to do) with Time-Series Cross-Section Data. *American Political Science Review* 89 (3):634-47.

Beck, Nathaniel and Jonathan N. Katz. 1996. Nuisance vs. Substance: Specifying and Estimating Time-Series-Cross-Section Models. *Political Analysis* 6 (1):1-36.

Beck, Nathaniel and Jonathan N. Katz. 2001. Throwing Out the Baby with the Bath Water: A Comment on Green, Kim, and Yoon. *International Organization* 55 (2):487-95.

Bergstrand, Jeffrey H. 1985. The Gravity Equation in International Trade: Some Microeconomic Foundations and Empirical Evidence. *The Review of Economics and Statistics* 67 (3):474-81.

Bienen, Henry and Jeffrey Herbst. 1996. The Relationship between Political and Economic Reform in Africa. *Comparative Politics* 29 (1):23-42.

Bliss, Harry and Bruce Russett. 1998. Democratic Trading Partners: The Liberal Connection, 1962-1989. *The Journal of Politics* 60 (4):1126-47.

Borenzstein, E., José De Gregorio and Jong-Wha Lee. 1998. How Does Foreign Direct Investment Affect Economic Growth? *Journal of International Economics* 45 (1):115-35.

Brady, Thomas A. 1991. The Rise of Merchant Empires, 1400-1700: A European Counterpoint. In *The Political Economy of Merchant Empires*, edited by James D. Tracy. Cambridge: Cambridge University Press.

Bull, Hedley. 1977. *The Anarchical Society*. London: MacMillan.

Buzan, Barry. 1984. Economic Structure and International Security: The Limits of the Liberal Case. *International Organization* 38 (4):597-624.

Caporaso, James A. 1992. International Relations Theory and Multilateralism: The Search for Foundations. *International Organization* 46 (3):599-632.

Carr, Edward H. 2001. *The Twenty Years' Crisis*. London: Palgrave Macmillan.

Clark, Ian. 1997. *Globalization and Fragmentation*. Oxford: Oxford University Press.

Clark, Ian. 2001. Globalization and the Post-Cold War Order. In *The Globalization of World Politics*, edited by John Baylis and Steve Smith. Oxford: Oxford University Press.

Collier, Paul and David Dollar. 1999. Aid, Risk and the Special Concerns of Small States. Washington D.C.: Policy Research Department, World Bank.

Conybeare, John A. C. 1987. *Trade Wars : The Theory and Practice of International Commercial Rivalry*. New York: Columbia University Press.

Copeland, David. 1996. Economic Interdependence and War: A Theory of Trade Expectations. *International Security* 20 (4):5-41.

International Finance Corporation. 1997. Foreign Direct Investment. In *IFC Lessons from Experience Series N°5*. Washington, D.C.: World Bank.

Costalli, Stefano. 2007. Power over the Sea: Euro-Mediterranean Relations and the Relevance of Neoclassical Realism. Paper presented at the *ECPR Joint Sessions of Workshop*. Helsinki.

Cox, Robert. 1983. Gramsci, Hegemony, and International Relations: An Essay in Method. *Millennium* 12 (1):162-75.

Crawford, Beverly. 1994. The New Security Dilemma Under International Economic Interdependence. *Millennium* 23 (1):25-55.

Dai, Xinyuan. 2002. Political Regimes and International Trade: The Democratic Difference Revisited. *American Political Science Review* 96 (1):159-65.

De Mello, Luiz. 1999. Foreign Direct Investment-Led Growth: Evidence from Time Series and Panel Data. *Oxford Economic Papers* 51 (1):133-51.

De Soysa, Indra and John Oneal. 1999. Boon or Bane? Reassessing the Productivity of Foreign Direct Investment. *American Sociological Review* 64 (5):766-82.

Deardorff, Alan. 1984. Testing Trade Theories and Predicting Trade Flows. In *Handbook of International Economics*, edited by Ronald Jones and Peter Kenen. Amsterdam-New York: North Holland.

Deardorff, Alan. 1998. Determinants of Bilateral Trade: Does Gravity Work in a Neoclassical World? In *The Regionalization of the World Economy*, edited by Jeffrey A. Frankel. Chicago: University of Chicago Press.

Deudney, Daniel and John Ikenberry 1995. After the Long War. In *Foreign Policy* 94 (Spring):21-35.

Deutsch, Karl W., Sidney Burrell, Robert Kahn, Maurice Lee, Martin Lichterman, Raymond Lindgren, Francis Loewenheim and Richard Van Wagenen. 1957. *Political Community and the North Atlantic Area*. Princeton: Princeton University Press.

Dixon, William J. and Bruce E. Moon. 1993. Political Similarity and American Foreign Trade Patterns. *Political Research Quarterly* 46 (1):5-25.

Dorussen, Han. 2006. Heterogeneous Trade Interests and Conflict: What You Trade Matters. *Journal of Conflict Resolution* 50 (87).

Dosch, Jörn. 2006. Managing Security in ASEAN-China Relations: Three Dimensions. Paper Presented at the *Annual Congress of the International Studies Association*. San Diego.

Doyle, Michael. 1983. Kant, Liberal Legacies and Foreign Affairs. *Philosophy and Public Affairs* 12 (3-4):205-35 and 323-53.

Dunning, John H. 1988. *Explaining International Production*. London: Unwin Hyman.

Dunning, John H. 1993. *Multinational Enterprises and the Global Economy*. Workingham-Reading: Addison-Wesley.

Earle, Edward Meade. 1986. Adam Smith, Alexander Hamilton, Friedrich List: The Economic Foundations of Military Power. In *Makers of Modern Strategy*, edited by Peter Paret. Oxford: Oxford University Press.

Eichengreen, Barry and Douglas Irwin. 1995. Trade Blocs, Currency Blocs and the Reorientation of World Trade in the 1930s. *Journal of International Economics* 38 (1):1-24.

Eichengreen, Barry and Douglas Irwin. 1996. The Role of History in Bilateral Trade Flows. 1-51. Cambridge, MA: National Bureau of Economic Research.

Engle, Robert and Clive W. J. Granger. 1987. Co-Integration and Error Correction: Representation, Estimation and Testing. *Econometrica* 55 (2):251-76.

Ethier, Wilfred J. and James R. Markusen. 1996. Multinational Firms Technology Diffusion and Trade. *Journal of International Economics* 41 (1-2):1-28.

Fearon, James. 1994. Domestic Political Audiences and the Escalation of International Disputes. *American Political Science Review* 88 (3):577-92.

Fearon, James. 1995. Rationalist Explanations for War. *International Organization* 49 (3):379-414.

Fearon, James D. and David D. Laitin. 1996. Explaining Interethnic Cooperation. *American Political Science Review* 90 (40):715-35.

Feaver, Peter D., Gunther Hellman, Randall L. Schweller, Jeffrey W. Taliaferro, William C. Wohlforth, Jeffery W. Legro and Andrew Moravcsik. 2000. Brother Can You Spare a Paradigm? (Or Was Anybody Ever a Realist?). *International Security* 25 (1):165-93.

Feenstra, Robert C. 2004. *Advanced International Trade: Theory And Evidence*. Princeton: Princeton University Press.

Foot, Rosemary. 1998. China in the ASEAN Forum: Organizational Processes and Domestic Modes of Thought. *Asian Survey* 38 (5):425-40.

Freund, Caroline and John McLaren. 1999. On the Dynamics of Trade Diversion: Evidence from Four Trade Blocs. *International Finance Discussion Paper 637*. Washington D.C.: Federal Reserve Board.

Galli, Carlo. 2004. *Guerra*. Roma-Bari: Laterza.

Gartzke, Erik. 1998. Kant We All Just get Along? Opportunity, Willingness, and the Origins of the Democratic Peace. *American Journal of Political Science* 42 (1):1-27.

Gartzke, Erik. 2007. The Capitalist Peace. *American Journal of Political Science* 51 (1):166-91.

Gartzke, Erik, Quan Li and Charles Boehmer. 2001. Investing in the Peace: Economic Interdependence and International Conflict. *International Organization* 55:391-438.

Gartzke, Erik and Quan Li. 2003b. Measure for Measure: Concept Operationalization and the Trade Interdependence–Conflict Debate. *Journal of Peace Research* 40:553-71.

Gartzke, Erik and Quan Li. 2003a. War, Peace, and the Invisible Hand: Positive Political Externalities of Economic Globalization. *International Studies Quarterly* 47:561-86.

Gelpi, Christopher F. and Joseph M. Grieco. 2008. Democracy, Interdependence, and the Sources of the Liberal Peace. *Journal of Peace Research* 45 (17):17-36.

Gibler, Douglas and Jamil A. Sewell. 2006. External Threat and Democracy: The Role of NATO Revisited. *Journal of Peace Research* 43 (4):413-31.

Gilpin, Robert. 1975. *U.S. Power And The Multinational Corporation: The Political Economy Of Foreign Direct Investment*. New York: Basic Books.

Gilpin, Robert. 1977. Economic Interdependence and National Security in Historical Perspective. In *Economic Issues and National Security*, edited by Frank Trager and Klauss Knorr. Lawrence: Regents Press of Kansas.

Gilpin, Robert. 1983. *War and Change in World Politics*. Cambridge-New York: Cambridge University Press.

Gilpin, Robert. 1987. *The Political Economy of International Relations*. Princeton: Princeton University Press.

Gilpin, Robert. 1996. No One Loves a Political Realist. *Security Studies* 5 (3):3-26.

Gilpin, Robert. 2000. *The Challenge of Global Capitalism: The World Economy in the 21st Century*. Princeton: Princeton University Press.

Gilpin, Robert. 2001. *Global Political Economy: Understanding the International Economic Order*. Princeton: Princeton University Press.

Goldstein, Itay and Assaf Razin. 2006. An Information-Based Trade Off between Foreign Direct Investment and Foreign Portfolio Investment. *Journal of International Economics* 70 (1):271-95.

Goldstein, Judith L., Douglas Rivers and Michael Tomz. 2007. Institutions in International Relations: Understanding the Effects of the GATT and the WTO on World Trade. *International Organization* 61 (1):37-67.

Gourevitch, Peter Alexis. 1977. International Trade, Domestic Coalitions, and Liberty: Comparative Responses to the Crisis of 1873-1896. *Journal of Interdisciplinary History* 8 (2):281-313.

Gowa, Joanne. 1989. Bipolarity, Multipolarity and Free Trade. *American Political Science Review* 83 (4):1245-56.

Gowa, Joanne and Soo Yeon Kim. 2005. An Exclusive Country Club: The Effects of the GATT on Trade, 1950–94. *World Politics* 57 (4):453-78.

Gowa, Joanne and Edward Mansfield. 1993. Power Politics and International trade. *American Political Science Review* 87 (2):408-20.

Gowa, Joanne and Edward Mansfield. 2004. Alliances, Imperfect Markets, and Major-Power Trade. *International Organization* 58 (4):775-805.

Granger, Clive W. J. and Paul Newbold. 1974. Spurious Regressions in Econometrics. *Journal of Econometrics* 2 (1):111-20.

Green, Donald P., Soo Yeon Kim and David H. Yoon. 2001. Dirty Pool. *International Organization* 55 (1):441-68.

Grieco, Joseph, Robert Powell, and Duncan Snidal. 1993. The Relative-Gains Problem for International Cooperation. *American Political Science Review* 87 (3):727-43.

Grieco, Joseph M. 1988. Anarchy and the Limits of Cooperation: A Realist Critique of the Newest Liberal Institutionalism. *International Organization* 42 (3):485-507.

Grossman, Gene M. and Elhanan Helpman. 1991. *Innovation and Growth in the Global Economy*. Cambridge (MA): MIT Press.

Haftel, Yoram Z. and Alexander Thompson. 2006. The Independence of International Organizations: Concept and Applications. *Journal of Conflict Resolution* 50 (2):253-75.

Hamilton, James D. 1994. *Time Series Analysis*. Princeton: Princeton University Press.

Hartley, Keith. 2006. Defence Industrial Policy in a Military Alliance. *Journal of Peace Research* 43 (4):473-89.

Heckscher, Eli. 1969. Mercantilism. In *Revisions in Mercantilism*, edited by Donald C. Coleman. London: Methuen.

Held, David, Anthony McGrew, David Goldblatt and Jonathan Perraton. 1999. *Global Transformations : Politics, Economics And Culture*. Cambridge: Polity Press.

Held, David and Anthony McGrew (eds.). 2002. *Governing Globalization: Power, Authority and Global Governance*. Cambridge: Polity Press.

Held, David and Anthony McGrew (eds.). 2007. *Globalization Theory: Approaches And Controversies*. Cambridge: Polity Press.

Helpman, Elhanan. 1984. A Simple Theory of Trade with Multinational Corporations. *Journal of Political Economy* 92 (3):451-71.

Helpman, Elhanan, Marc Melitz and Stephen Yeaple. 2004. Export Versus FDI with Heterogeneous Firms. *American Economic Review* 94 (1):300-16.

Herz, John H. 1950. Idealist Internationalism and the Security Dilemma. *World Politics* 2 (2):157-80.

Hoffmann, Stanley. 1963. Rousseau on War and Peace. *American Political Science Review* 57 (2):317-33.

Howse, Robert. 2006. Montesquieu on Commerce, Conquest, War and Peace. *Brooklyn Journal of International Law* 31 (3):693-708.

Hsiao, Cheng. 2003. *Analysis of Panel Data*. Cambridge-New York: Cambridge University Press.

Huntington, Samuel P. 1991. *The Third Wave: Democratization in the Late Twentieth Century*. Norman: University of Oklahoma Press.

Ikenberry, John. 1995. Funk de Siècle: Impasses of Western Industrial Society at Century's End. *Millennium* 24 (1):113-26.

Ikenberry, John and Charles Kupchan. 1990. Socialization and Hegemonic Power. *International Organization* 44 (3):283-315.

Irwin, Douglas. 1996. *Against the Tide: An Intellectual History of Free Trade*. Princeton: Princeton University Press.

Jakobsen, Jo and Indra De Soysa. 2006. Do Foreign Investors Punish Democracy? *Kyklos* 59 (3):383-410.

Javorcik, S. Beata. 2004. Does Foreign Direct Investment Increase the Productivity of Domestic Firms? In Search of Spillovers through Backward Linkages. *American Economic Review* 94 (3):605-27.

Jensen, Nathaniel. 2003. Democratic Governance and Multinational Corporations: Political Regimes and Inflows of Foreign Direct Investment. *International Organization* 57 (3):587-616.

Jervis, Robert. 1999. Realism, Neoliberalism and Cooperation. *International Security* 24 (1):42-63.
Kagan, Donald. 2003. *The Peloponnesian War*. New York: Viking.

Kaminski, Bartolomieij and Beata Smarzynska. 2001. Integration into Global Production and Distribution Networks through FDI: the Case of Poland. *Post-Communist Economies* 13 (3):265-88.

Kastner, Scott. 2007. When Do Conflicting Political Relations Affect International Trade? *Journal of Conflict Resolution* 51 (4):664-88.

Kennedy, Paul. 1976. *The Rise and Fall of British Naval Mastery*. London: A. Lane.

Kennedy, Paul. 1988. *The Rise and Fall of the Great Powers*. London: Unwin Hyman.

Keohane, Robert O. 1984. *After Hegemony : Cooperation and Discord in the World Political Economy*. Princeton: Princeton University Press.

Keohane, Robert O. 1986. Reciprocity in International Relations. *International Organization* 40 (1):1-27.

Keohane, Robert O. and Joseph Nye. 1977. *Power and Interdependence: World Politics in Transition*. Boston-Toronto: Little Brown.

Keohane, Robert O. and Lisa Martin. 1995. The Promise of Institutionalist Theory. *International Security* 20 (1):39-51.

Keshk, Omar M. G., Brian M. Pollins and Rafael Reuveny. 2004. Trade Still Follows the Flag: The Primacy of Politics in a Simultaneous Model of Interdependence and Armed Conflict. *The Journal of Politics* 66 (4):1155-79.

Kimball, Anessa L. 2006. Alliance Formation and Conflict Initiation: The Missing Link. *Journal of Peace Research* 43 (4):371-89.

Kindleberger, Charles P. 1981. Dominance and Leadership in the International Economy: Exploitation, Public Goods, and Free Ride. *International Studies Quarterly* 25 (2):242-54.

King, Gary. 2001. Proper Nouns and Methodological Propriety: Pooling Dyads in International Relations Data. *International Organization* 55 (2):497-507.

Koenig-Archibugi, Mathias. 2007. Rivisitando il neorealismo: Kenneth Waltz tra teoria della politica internazionale e teoria strutturale della politica. *Rivista Italiana di Scienza Politica* 37 (1):pp. 113-24.

Krasner, Stephen D. 1991. Global Communications and National Power: Life on the Pareto Frontier. *World Politics* 43 (3):336-66.

Krugman, Paul. 1980. Scale Economies, Product Differentiation, and the Pattern of Trade. *American Economic Review* 70 (5):950-9.

Krugman, Paul and Elhanan Helpman. 1985. *Market Structure and Foreign Trade : Increasing Returns, Imperfect Competition and The International Economy*. Brighton: Wheatsheaf.

Lake, David A. 1996. Anarchy, Hierarchy and the Variety of International Relations. *International Organization* 50 (1):1-33.

Leeds, Brett Ashley, Jeffrey M. Ritter, Sara Mitchell and Andrew G. Long. 2002. Alliance Treaty Obligations and Provisions, 1815–1944. *International Interactions* 28 (2):237-60.

Leeds, Brett Ashley. 2003. Alliance Reliability in Times of War: Explaining State Decisions to Violate Treaties. *International Organization* 57 (4):801-27.

Leeds, Brett Ashley, Andrew G. Long, and Sara McLaughlin Mitchell. 2000. Reevaluating Alliance Reliability: Specific Threats, Specific Promises. *The Journal of Conflict Resolution* 44 (5):686-99.

Levy, Jack S. 2003. Economic Interdependence, Opportunity Costs and Peace. In *Economic Interdependence and International Conflict: New Perspectives on an Enduring Debate*, edited by Brian M. Pollins and Edward D. Mansfield. Ann Arbor: University of Michigan Press.

Li, Quan. 2006a. Democracy, Autocracy, and Tax Incentives to Foreign Direct Investors: A Cross-National Analysis. *The Journal of Politics* 68 (1):62-74.

Li, Quan. 2006b. Political Violence and Foreign Direct Investment. In *Regional Economic Integration*, edited by Alan Rugman and Michele Fratianni. Amsterdam Elsevier.

Li, Quan and David Sacko. 2002. The (Ir)Relevance of Militarized Interstate Disputes for International Trade. *International Studies Quarterly* 46 (1):11-48.

Li, Quan and Adam Resnick. 2003. Reversal of Fortunes: Democratic Institutions and Foreign Direct Investment Inflows to Developing Countries. *International Organization* 57 (1):175-211.

Li, Quan and Rafael Reuveny. 2003. Economic Globalization and Democracy: An Empirical Analysis. *British Journal of Political Science* 33 (1):29-54.

Liberman, Peter. 1996. Trading With the Enemy: Security and Relative Economic Gains. *Intenational Security* 21 (1):1996.

Liberman, Peter. 1999. The Offense-Defense Balance, Interdependence and War. *Security Studies* 9 (2):59-91.

Lindblom, Charles. 1977. *Politics and Markets : The World's Political Economic Systems*. New York: Basic Books.

Lipson, Charles. 1984. International Cooperation in Economic and Security Affairs. *World Politics* 37 (1):1-23.

Long, Andrew G. 2003. Defense Pacts and International Trade. *Journal of Peace Research* 40 (5):537-52.

Long, Andrew G. and Brett Ashley Leeds. 2006. Trading for Security: Military Alliances and Economic Agreements. *Journal of Peace Research* 43 (4):433-51.

Luttwak, Edward. 1990. From Geopolitics to Geoeconomics. *The National Interest* 20 (3):17-23.

Machiavelli, Niccolò. 1997. *The Prince*. New Haven: Yale University Press.

Mansfield, Edward. 1994. *Power, Trade and War*. Princeton: Princeton University Press.

Mansfield, Edward. 1998. The Proliferation of Preferential Trading Arrangements. *Journal of Conflict Resolution* 42 (5):523-43.

Mansfield, Edward and Rachel Bronson. 1997a. Alliances, Preferential Trade Agreements and International Trade. *American Political Science Review* 91 (1):94-107.

Mansfield, Edward and Rachel Bronson. 1997b. The Political Economy of Major-Power Trade Flows. In *The Political Economy of Regionalism*, edited by Helen V. Milner and Edward Mansfield. New York: Columbia University Press.

Mansfield, Edward and Marc L. Busch. 1995. The Political Economy of NonTariff Barriers: A Cross-National Analysis. *International Organization* 49 (4):723-49.

Mansfield, Edward, Helen Milner and Peter Rosendorff. 2000. Free to Trade: Democracies, Autocracies and International Trade. *American Political Science Review* 94 (2):305-21.

Mansfield, Edward, Helen Milner and Peter Rosendorff. 2002. Replication, Realism, and Robustness: Analyzing Political Regimes and International Trade. *American Political Science Review* 96 (1):167-9.

Mansfield, Edward, Helen Milner and Peter Rosendorff. 2002. Why Democracies Cooperate More: Electoral Control and International Trade Agreements. *International Organization* 56 (3):477-513.

Mansfield, Edward, Helen Milner and Jon C. Pevehouse. 2005. Vetoing Cooperation: The Impact of Veto Players on International Trade Agreements. Paper presented at the *Annual Congress of the International Studies Association*. Honolulu, Hawaii.

Mansfield, Edward and Jon C. Pevehouse. 2000. Trade Blocs, Trade Flows, and International Conflict. *International Organization* 54 (4):775-808.

Maoz, Zeev. 2006. Network Polarization, Network Interdependence, and International Conflict, 1816–2002. *Journal of Peace Research* 43 (4):391-411.

Markusen, James R. 1984. Multinationals, Multi-Plant Economies, and the Gains from Trade. *Journal of International Economics* 16 (3-4):205-26.

Markusen, James R. 1997. Trade versus Investment Liberalisation. Cambridge (MA): National Bureau of Economic Research.

Markusen, James R. 2001. Contracts, Intellectual Property Rights, and Multinational Investment in Developing Countries. *Journal of International Economics* 53 (1):189-204.

Markusen, James R. 2002. *Multinational Firms and the Theory of International Trade*. Cambridge (MA): MIT Press.

Marshall, Monty G. and Keith Jaggers. 2005. Polity IV Project. Dataset Users' Manual. Arlington: George Mason University.

Martin, Lisa and Beth Simmons. 1998. Theories and Empirical Studies of International Institutions. *International Organization* 52 (4):729-57.

Mastanduno, Michael. 1998. Economics and Security in Statecraft and Scholarship. *International Organization* 52 (4):825-54.

McMillan, Susan M. 1997. Interdependence and Conflict. *Mershon International Studies Review* 41 (1):33-58.

Mearsheimer, John J. 1994-1995. The False Promise of International Institutions. *International Security* 19 (3):5-49.

Mearsheimer, John J. 2001. *The Tragedy of Great Power Politics*. New York-London: Norton.

Milner, Helen and Keiko Kubota. 2005. Why the Move to Free Trade? Democracy and Trade Policy in the Developing Countries. *International Organization* 59 (1):107-43.

Montesquieu, Charles de S. 1989. *The Spirit of the Laws*. Cambridge-New York: Cambridge University Press.

Moravcsik, Andrew. 1997. Taking Preferences Seriously: A Liberal Theory of International Politics. *International Organization* 51 (4):513-53.

Morgenthau, Hans Joachim. 1985. *Politics among Nations: The Struggle for Power and Peace*. New York: Knopf.

Morrow, James D., Randolph M. Siverson and Tressa Tabares. 1998. The Political Determinants of International Trade: The Major Powers, 1907-90. *American Political Science Review* 92 (3):649-61.

Morrow, James D, Randolph M. Siverson and Tressa Tabares. 1999. Correction to "The Political Determinants of International Trade". *American Political Science Review* 93 (4):931-3.

Mousseau, Michael, Havard Hegre and John R. Oneal. 2003. How the Wealth of Nations Conditions the Liberal Peace. *European Journal of International Relations* 9 (2):277-314.

North, Douglass C. 1990. *Institutions, Institutional Change, and Economic Performance*. Cambridge: Cambridge University Press.

OECD. 2006. International Investment Perspectives. Paris: OECD.

Olson, Mancur. 1993. Dictatorship, Democracy, and Development. *American Political Science Review* 87 (3):567-76.

Oneal, John R. 2003. Measuring Interdependence and Its Pacific Benefits: A Reply to Gartzke & Li. *Journal of Peace Research* 40 (6):721-5.

Oneal, John R., Frances H. Oneal, Zeev Maoz, and Bruce Russett. 1996. The Liberal Peace: Interdependence, Democracy, and International Conflict, 1950-85. *Journal of Peace Research* 33 (1):11-28.

Oneal, John R., and James Lee Ray. 1997. New Tests of the Democratic Peace: Controlling for Economic Interdependence, 1950-85. *Political Research Quarterly* 50 (4):751-75.

Oneal, John R. and Bruce Russett. 1997. The Classical Liberals Were Right: Democracy, Interdependence, and Conflict, 1950–1985. *International Studies Quarterly* 41:267-94

Oneal, John R. and Bruce Russett. 1999a. The Kantian Peace. The Pacific Benefits of Democracy, Interdependence, and International Organizations. *World Politics* 52 (1):1-37.

Oneal, John R. and Bruce Russett. 1999b. Assessing the Liberal Peace with Alternative Specifications: Trade Still Reduces Conflict. *Journal of Peace Research* 36 (4):423-42.

Oneal, John R., Bruce Russett and Michael L. Berbaum. 2003. Causes of Peace: Democracy, Interdependence, and International Organizations, 1885–1992. *International Studies Quarterly* 47 (3):371-93.

Ormrod, David. 2003. *The Rise of Commercial Empires: England and the Netherlands in the Age of Mercantilism*. Cambridge: Cambridge University Press.

Panebianco, Angelo. 1997. *Guerrieri democratici*. Bologna: Il Mulino.

Panebianco, Angelo. 2004. *Il potere, lo stato, la libertà*. Bologna: il Mulino.

Parsi, Vittorio E. 1998. *Interesse nazionale e globalizzazione*. Milano Jaca Book.

Pevehouse, Jon C. 2004. Interdependence Theory and the Measurement of International Conflict. *The Journal of Politics* 66 (1):247-66.

Plumper, Thomas and Vera Troeger. 2007. Efficient Estimation of Time-Invariant and Rarely Changing Variables in Finite Sample Panel Analyses with Unit Fixed Effects. *Political Analysis* 15 (2):124-39.

Polacheck, Salomon W. 1980. Conflict and Trade. *Journal of Conflict Resolution* 24 (1):55-76.

Pollins, Brian M. 1989a. Conflict, Cooperation and Commerce: The Effect of International Political Interactions on Bilateral Trade Flows. *American Journal of Political Science* 33 (3):737-61.

Pollins, Brian M. 1989b. Does Trade Still Follow the Flag? *American Political Science Review* 83 (2):465-80.

Posen, Barry R. 1993. The Security Dilemma and Ethnic Conflict. In *Ethnic Conflict and International Security*, edited by Michael E. Brown. Princeton: Princeton University Press.

Powell, Robert. 1991. Absolute and Relative Gains in International Relations Theory. *American Political Science Review* 85 (4):1303-20.

Powers, Kathy L. 2006. Dispute Initiation and Alliance Obligations in Regional Economic Institutions. *Journal of Peace Research* 43 (4):453–71.

Powers, Kathy L. and Gary Goertz. 2005. Regional Trade Agreements as Security Institutions Project: Challenges in Coding Multi-issue Treaties. Paper presented at the *Annual Meeting of the American Political Science Association*.

Resmini, Laura. 2000. The Determinants of Foreign Direct Investment in the CEECs. *Economics of Transition* 8 (3):665-89.

Ricchiuti, Giorgio. 2004. Empirical Evidence on the North-South Trade Flows: an Augmented Gravity Model. Ph.D. thesis, Università degli Studi di Firenze, Firenze.

Rogowsky, Ronald. 1987. Trade and the Variety of Democratic Institutions. *International Organization* 41 (2):203-24.

Rose, Andrew. 2004. Do We Really Know That the WTO Increases Trade? *American Economic Review* 94 (1):98-114.

Rose, Andrew. 2005. Which International Institutions Promote International Trade? *Review of International Economics* 13 (4):682-98.

Rosecrance, Richard and Peter Thompson. 2003. Trade, Foreign Investment and Security. *Annual Review of Political Science* 6:377-98.

Rosendorff, Peter and Helen Milner. 2001. The Optimal Design of International Trade Institutions: Uncertainty and Escape. *International Organization* 55 (4):829-57.

Rosow, Stephen J. 1984. Commerce, Power and Justice: Montesquieu on International Politics. *The Review of Politics* 46 (3):346-66.

Russett, Bruce and John R. Oneal. 2001. *Triangulating Peace*. New York: Norton.

Schmitt, Carl. 1972. *Le categorie del politico*. Bologna: Il Mulino.

Schweller, Randall L. and David Priess. 1997. A Tale of Two Realisms: Expanding the Institutions Debate. *Mershon International Studies Review* 41 (1):1-32.

Schweller, Randall L. 2003. The Progressiveness of Neoclassical Realism. In *Progress in International Relations Theory: Appraising the Field*, edited by Miriam F. Elman and Colin Elman. Cambridge (MA) – London: MIT Press.

Skalnes, Lars S. 1998. Grand Strategy and Foreign Economic Policy: British Grand Strategy in the 1930s. *World Politics* 50 (4):582-616.

Smith, Adam. 1993. *An Inquiry into the Nature and Causes of the Wealth of Nations*. Oxford-New York: Oxford University Press.

Snidal, Duncan. 1985a. Coordination versus Prisoners' Dilemma: Implications for International Cooperation and Regimes. *American Political Science Review* 79 (4):923-42.

Snidal, Duncan. 1985b. The Limits of Hegemonic Stability Theory. *International Organization* 39 (4):579-614.

Snidal, Duncan. 1991. Relative Gains and the Pattern of International Cooperation. *American Political Science Review* 85 (3):701-26.

Snyder, Glenn. 1984. The Security Dilemma in Alliance Politics. *World Politics* 36 (4):461-95.

Snyder, Glenn. 1996. Process Variables in Neorealist Theory. *Security Studies* 5 (3):167-92.

Snyder, Glenn. 1997. *Alliance Politics*. Ithaca (NY): Cornell University Press.

Soo Yeon, Kim and Sophie Meunier. 2002. Trade and Security in the Globalization era: A Comparison of the EU and the APEC. Paper presented at the *Annual Congress of the American political Science Association*. Boston.

Sprecher, Christopher and Krause Volker. 2006. Alliances, Armed Conflict, and Cooperation: Theoretical Approaches and Empirical Evidence. *Journal of Peace Research* 43 (4):363-9.

Stein, Arthur R. 1993. Goverments, Economic Interdependence and International Cooperation. In *Behavior, Society and International Conflict*, edited by Jo L. Husbands, Robert Jervis, P. C. Stern, Philip Tetlock and Charles Tilly. Oxford-New York: Oxford University Press.

Stock, James H. and Mark Watson. 1988. Testing for Common Trends. *Journal of the American Statistical Association* 83 (404):1097-107.

Strand, Håvard, Joachim Carlsen, Nils Petter Gleditsch, Håvard Hegre, Christin Ormhaug and Lars Wilhelmsen. 2005. Armed Conflict Dataset Codebook Version 3-2005. Oslo: International Peace Research Institute.

Strange, Susan. 1994. *States and Markets*. London-New York: Pinter Publishers.

Strange, Susan. 1996. *The Retreat of the State: The Diffusion of Power in the World Economy*. Cambridge-New York: Cambridge University Press.

Strange, Susan. 1997. An International Political Economy Perspective. In *Governments, Globalization and International Business*, edited by John H. Dunning. Oxford: Oxford University Press.

Tinbergen, Jan. 1962. *Shaping the World Economy: Suggestions for an International Economic Policy*. New York: Twentieth Century Fund.

Tsebelis, George. 1995. Decision Making in Political Systems: Veto Players in Presidentialism, Parliamentarism, Multicameralism, and Mulitpartyism. *British Journal of Political Science* 25 (3):289-325.

Viner, Jacob. 1948. Power versus Plenty as Objectives of Foreign Policy in the XVII and XVIII Centuries. *World Politics* 1 (1):1-29.

Waltz, Kenneth N. 1959. *Man, the State and War*. New York: Columbia University Press.

Waltz, Kenneth N. 1970. The Mith of National Interdependence. In *The International Corporation*, edited by Charles P. Kindleberger. Cambridge (MA): MIT Press.

Waltz, Kenneth N. 1979. *Theory of International Politics*. Reading: Addison-Wesley.

Waltz, Kenneth N. 1996. International Politics is not Foreign Policy. *Security Studies* 6 (1):54 - 7.

Ward, Michael, Randolph M. Siverson and Cao Xun. 2007. Disputes, Democracies, and Dependencies: A Reexamination of the Kantian Peace. *American Journal of Political Science* 51 (3):583-601.

Wendt, Alexander. 1994. Collective Identity Formation and the International State. *American Political Science Review* 88 (2):384-98.

Whitehead, Laurence. 2001. Three International Dimensions of Democratization In *The International Dimensions of Democratization* edited by Laurence Whitehead. Oxford: Oxford University Press.

Williamson, Oliver E. 1985. *The Economic Institutions of Capitalism*. New York: Free Press.

Wolfers, Arnold and Laurance Martin. 1956. *The Anglo-American Tradition in Foreign Affairs*. New Haven: Yale University Press.

Wooldridge, Jeffrey. 2002. *Econometric Analysis of Cross Section and Panel Data*. Cambridge (MA): MIT Press.

Wooldridge, Jeffrey. 2006. *Introductory Econometrics: A Modern Approach*. Mason: Thomson/South-Western.

WTO. 1998. Annual Report 1998. Geneva.

WTO. 2007. Annual Report 2007. Geneva.

Yarbrough, Beth and Robert Yarbrough. 1992. *Cooperation and Governance in International Trade: The Strategic Organizational Approach*. Princeton: Princeton University Press.